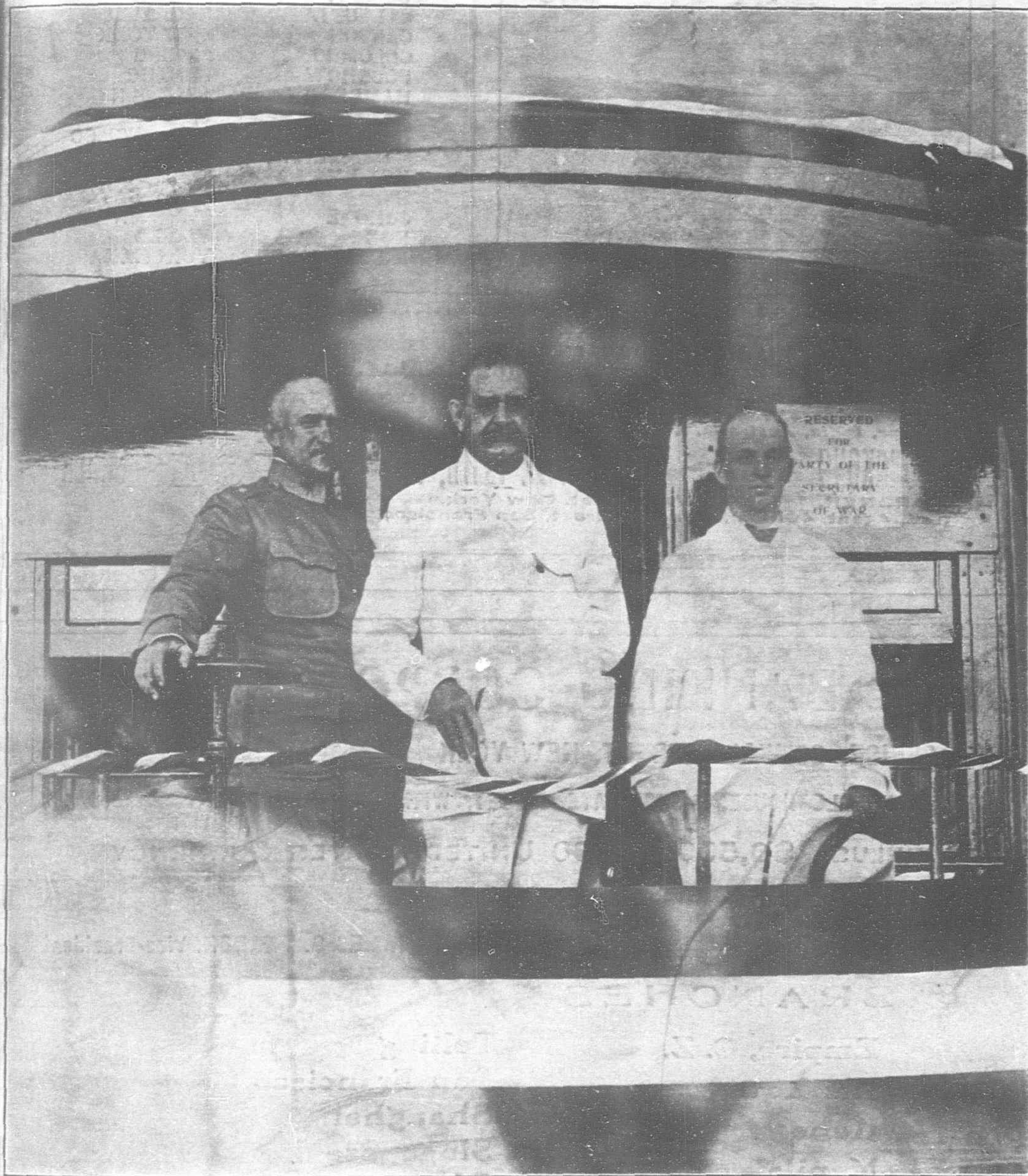


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THE FAR EASTERN REVIEW

VOL. VII.—No. 5. MANILA, SHANGHAI AND YOKOHAMA, OCTOBER, 1910.

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Rear View of Special Train on Philippine Railway Co.'s Line at Passi, Panay, Showing Secretary of War Dickinson, General Edwards and Governor General Forbes on Occasion of the Formal Opening of the Line.

Opening of
British Section
of the Kowloon-
Canton Railway

Canton-Hankow
Railway
Construction

Philippine Railways
for 1910

General News
and Comment

Cyaniding in the
Philippines

ENGINEERING
COMMERCE FINANCE

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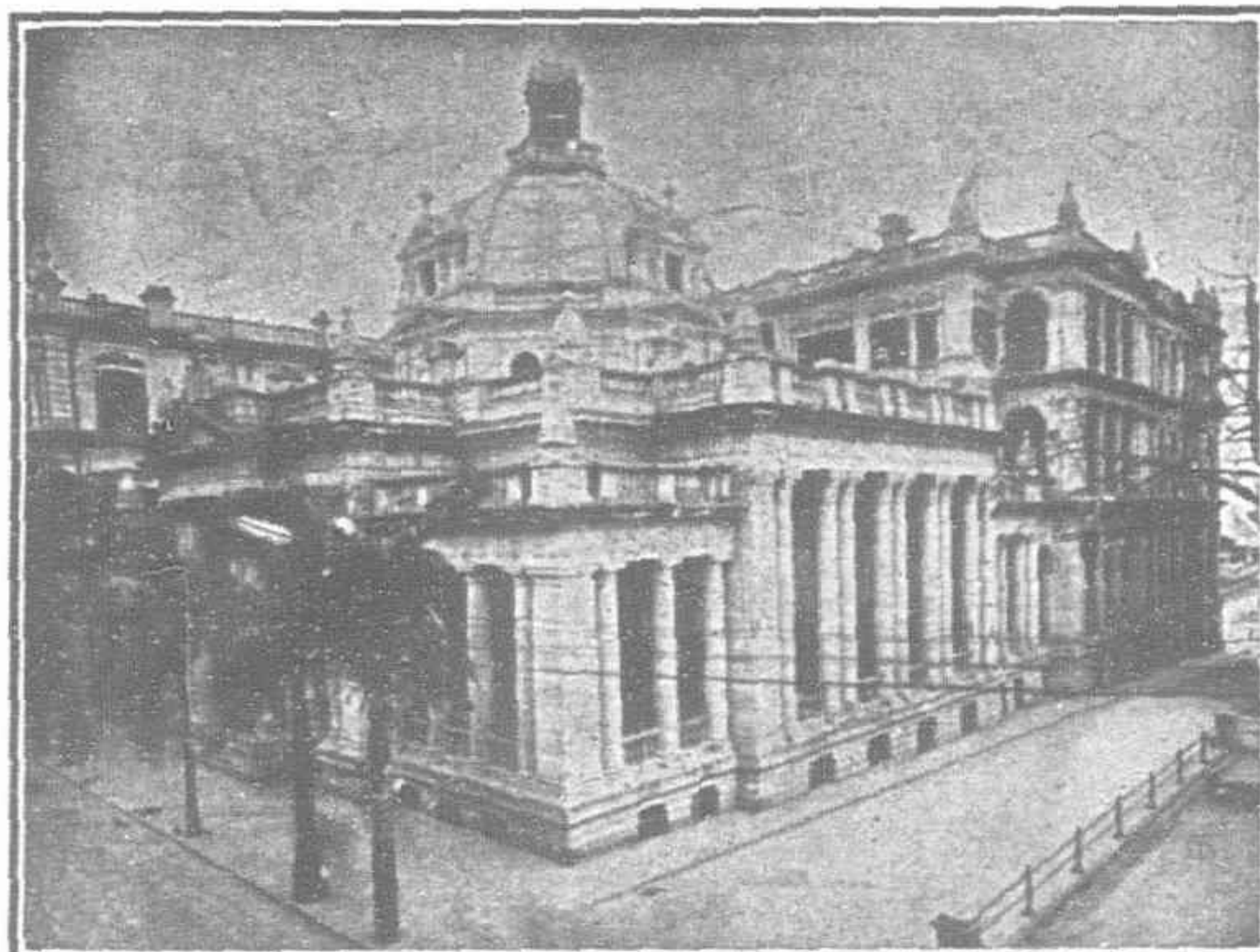
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THE FAR EASTERN REVIEW

COMMERCE • ENGINEERING • FINANCE

VOL. VII. MANILA, P. I., SHANGHAI, AND YOKOHAMA, OCTOBER, 1910 No. 5.

FORMAL OPENING OF THE BRITISH SECTION OF THE KOWLOON-CANTON RAILWAY

The formal opening of the British Section of the Kowloon-Canton Railway by H. E. Sir Henry May, K. C. M. G., Officer Administering the Government, took place on the afternoon of October 1, at Kowloon, on a vacant lot in front of the post office in the presence of a large number of officials and citizens of the colony. A guard of Indian troops surrounded the platform and the Mah-ratta band was in attendance. On the plat-

Consul General at Canton, and Captain Garnett, A. D. C. to His Excellency.

Manager Director E. S. Lindsay presided and in introducing His Excellency, Sir Henry May, gave a short review of the history of the line which is of special interest and by courtesy of the *Daily Press* we reproduce it as follows:

"Your Excellencies, Ladies and Gentlemen: We are assembled to-day to send forth on its

ready to start on the journey of life. Even the most prosperous careers have their set backs and it is not to be expected that our young friend will have an exception, but its parents and guardians are not hysterically inclined, and as long as it keeps steadily on its way, and refrains from going off the track—even occasionally—there is no reason to doubt that it will eventually settle down into regular and comfortable practice, and amply repay



SCENE AT THE KOWLOON TERMINAL OF THE BRITISH SECTION SHOWING FIRST TRAIN ABOUT TO LEAVE

form accompanying His Excellency were Lady May, H. E. Major General Broadwood, H. E. Wei Han representing the Viceroy of Canton, The Hon. W. Chatham, C. M. G., Director of Public Works, The Hon. Murray Stewart, the Hon. E. Osborne, A. H. Harris, Esq., Commissioner I. C. Customs, Colonel C. W. R. St. John, E. S. Lindsay, Esq., General Manager of the British Section, Kowloon-Canton Railway, The Hon. Wei Wuk, The Hon. J. W. Jameson, C. M. G., H. B. M.

prosperous career the latest offspring of your prolific colony. For the past four years the up-bringing and education of the child has been proceeding in the New Territory, and although during this period the youngster has not been altogether free from infantile troubles, severe chills from typhoons, a little dyspepsia now and then, and other ills that a young and growing railway is heir to, its sound constitution has pulled it through, and with sinews of steel it stands before us a promising youngster full of "go" and

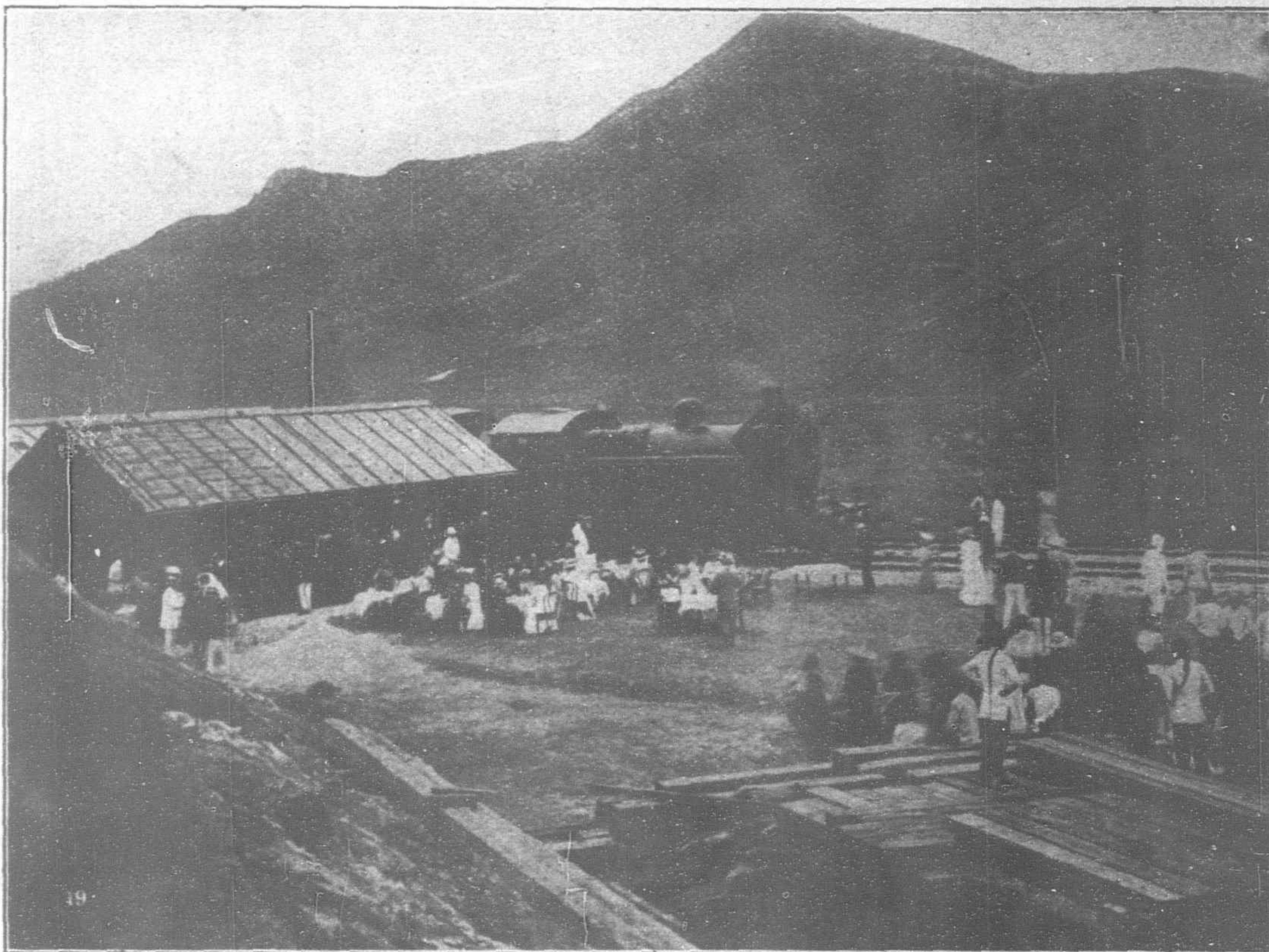
those who have done so much for it. And as in the life of all union is desirable, we will hope that ere long a suitable one will be forthcoming from across the frontier. There may be some in this assembly who may assert that they travel the fastest who travel alone, but I would remind them that it is equally true that they who travel fast travel light—and that in this case unity means strength in bearing each other's burdens, and the prosperity of the countries which union represents. In the year 1898 the British and Chinese Cor-

itself will pay remunerative interest on the large capital spent on its construction. But the indirect beneficial results to the Colony will, I think, be such as to recompense it in some measure for the large expenditure that has been incurred. All of us, Europeans and Chinese alike, have a feeling how an historic Kowloon tiger would feel if he were caged. We want more elbow room. We need more frequent change of environment. This railway will enable some of us to take short holidays from our work—and from each other. (Laughter.) Others again will prefer to lead the simple life in the country, visiting Hongkong daily for their

tant step in the material improvement of the Colony which Providence has entrusted to our keeping. Let us not in this hour forget the men who have contributed to the work—Sir Matthew Nathan, whose foresight materially assisted in the provision of funds to defray its cost and who initiated the work; Sir Frederick Lugard, under whose able control the work has been carried out; Mr. G. W. Eves, Mr. E. S. Lindsey, and their staff of engineers, who have completed a work which is a credit to British engineering. May this undertaking, under the guidance of Almighty Providence, bring to our dearly loved Colony increased prosperity and happiness. With this prayer on my lips I declare the British

estimate which footed up \$8,003,642, but did not include provision for rolling stock or workshops, etc. In December of the same year an amended estimate amounting to \$9,860,283.83 was submitted that included the cost of rolling stock and of the resumption of the deep sea wharf near Blackhead Point but did not provide for workshops or for terminal site. In May, 1909, another revised estimate was submitted which amounted to \$11,004,128 which covered all items with the exception of sufficient funds to cover all of the resumption charges.

The last estimates submitted in 1910 included all items to cover the completion of the road and amounted to \$12,371,495.46, the excess of \$1,367,367.46 over the 1909 estimate included



VIEW OF LOWU STATION AT THE BOUNDARY LINE BETWEEN BRITISH AND CHINESE TERRITORY AND TERMINAL OF BRITISH SECTION

business. I expect, therefore, to see in course of time a great revolution in the social condition of the Colony. The country to which this railway will introduce you is very beautiful. In the russet garb it assumes in winter, it will remind some of you of your far distant Highlands; the emerald mantle that it dons in summer rivals the emerald dress of comely Erin; the resounding ocean which washes its shores stirs the memories and the hearts of Englishmen. There you may taste of one of the sweetest joys in life—the enjoyment of Nature's beauty. And there too our Chinese citizens may change the restrictions which life in a large city is always subject to for the comparative freedom of a home in the country. This railway will in short bring to the inhabitants of the district, if it does not bring greater riches, it will bring what is better than gold and silver—more enjoyment of life and greater contentment of spirit. To these advantages will succeed a better understanding of the inhabitants of the district now opened to you, and in course of time closer intercourse and more intimate relations with the officials and people of the great Empire on your borders. The work that is this day consummated is an impor-

Section of the Canton Kowloon Railway open for traffic." (Applause.)

The British Section of the Kowloon-Canton line connects Hongkong with the Chinese boundary covering a distance of 22 miles while from the boundary to Canton is 89 miles. The concession for the construction of the Kowloon-Canton Railway was granted the British Chinese Corporation in 1898 but no progress was made for years by the concessionaires. In 1905 the American-China Development Company retired from active interest in the construction of the Canton-Hankow Railway and the plans for an extensive terminal at Canton was abandoned. In redeeming the concession, the Chinese were obliged to secure outside assistance and the commercial interests of Hongkong realizing that this was the opportunity to strike a bargain for traffic connection advanced the sum of £350,000. The survey of the British section was at once undertaken and by the end of 1905 two and one-half miles of embankment and a survey for final location were completed and the title of the land for the right of way resumed by the Crown. The first rough estimate of cost for this line was submitted by Mr. Bruce and amounted to \$5,053,274 and did not include the provision for workshops buildings, rolling stock, etc. In June, 1907, the Chief Resident Engineer submitted a more carefully prepared

one large item of \$913,922.67 covering interest and loss of exchange not previously referred to. The balance of the increase in cost is found in the following items:

Estimates for earthwork, \$319,403.95; tunnels, \$311,320.50; roads, \$35,220.16; major bridges, \$138,729.05; minor bridges, \$10,522.19; culverts, \$10,522.19; boundary fencing, \$7,302.23; telegraphy, \$3,060.75; home charges, \$50,000 amounting in all to \$875,558.83.

Savings on buildings, \$139,998.47 and construction of plant, \$132,115.57 with anticipated sales for the year of \$150,000 in all \$420,114.04, reduced the total increase to \$453,444.79.

It might be said that the difference in the several estimates has been subject for much discussion and not a little criticism from those not conversant with the conditions under which the first and second estimates were made. The difference between Mr. Bruce's estimate of \$5,053,274 and the last estimate of \$12,371,495.46 amounting to \$7,318,221.46, however, has been well accounted for and the expenditure will no doubt be fully justified when the benefits of the line are realized. As explained previously the 1905 estimate was in the rough and made no provision for rollingstock, workshops, etc. Indeed, the first real estimate based on the initial work was that of the Resident Engineer in June, 1907, which amounted to \$8,003,642.63.

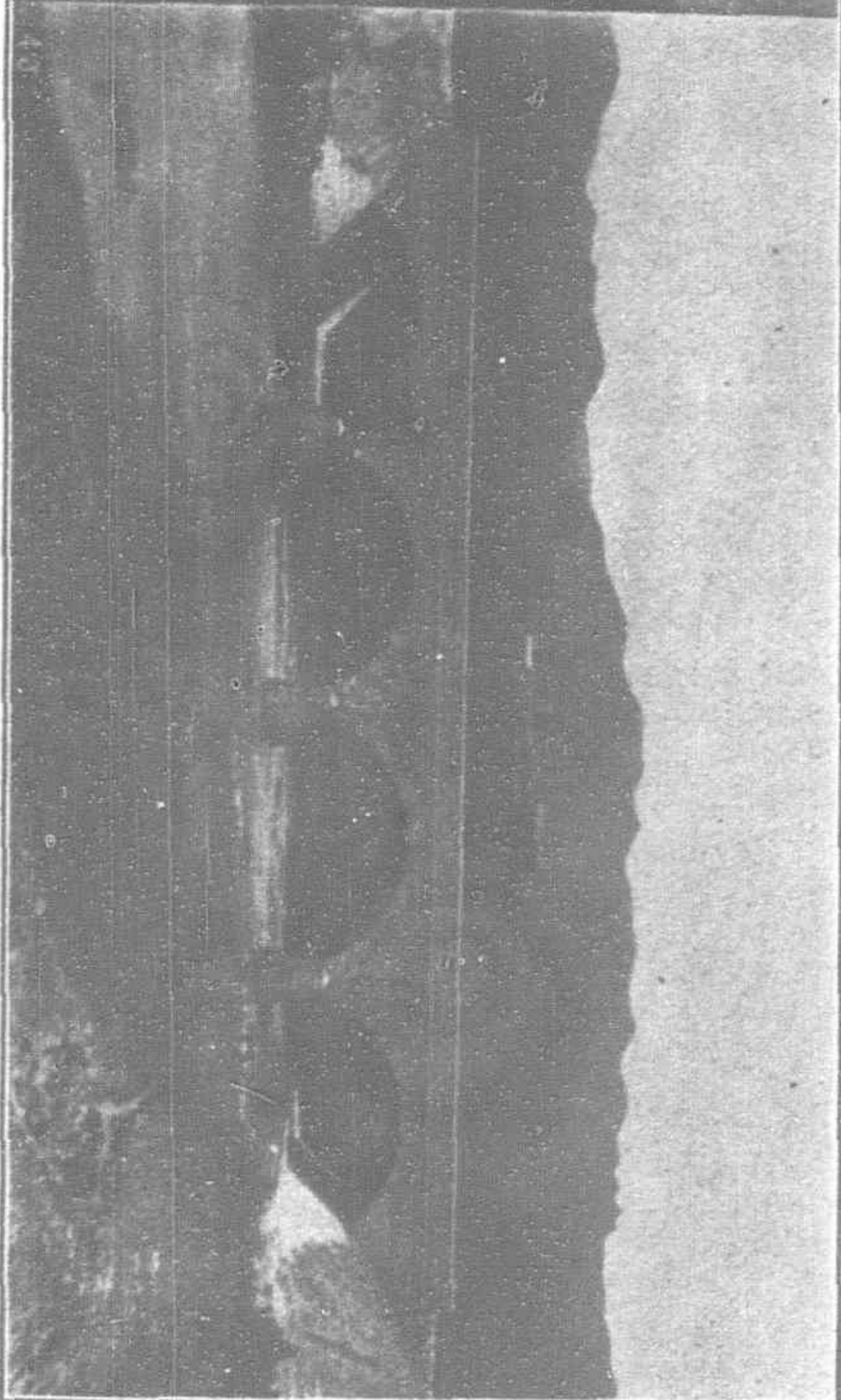
Tunnel No. 5.—923 feet, \$327.14 a foot, in all \$301,959.94.

The cost of acquiring the necessary land ex-

The principal saving included \$132,182.47 on constructions and \$36,882.75 on ballast and permanent way. The following comparative table issued March 7, 1910, is of special interest at this time:

(BRITISH SECTION)

Estimate of June, 1907.	Revised Estimate of 1909.	Further Revised Estimate of 1910.	Variations be- tween Estimates of 1909 & 1910.	Expenditure to 31st Dec., 1909.	Anticipated Ex- penditure to the end of Construc- tion.	Grand Total.
\$45,000.00	\$42,277.65	\$42,277.65	.....	\$42,277.65	.....	\$42,277.65
139,700.00	1,195,879.20	1,195,879.20	.....	762,863.55	\$433,015.65	1,195,879.20
2,400,504.70	2,268,176.05	2,587,580.00	\$319,403.95	2,047,323.04	540,256.96	2,587,580.00
2,203,415.00	3,499,824.69	3,811,145.19	311,320.50	3,480,248.19	330,897.00	3,811,145.19
82,500.00	84,979.84	120,200.00	35,220.16	4,957.63	115,242.37	120,200.00
585,911.57	677,766.36	816,495.41	138,729.05	648,816.92	167,678.49	816,495.41
422,718.11	339,604.28	350,126.47	10,522.19	321,793.12	28,333.35	350,126.47
68,882.00	65,243.86	72,546.09	7,302.23	68,721.56	3,824.53	72,546.09
31,813.00	39,999.45	39,999.45	.....	996.45	39,003.00	39,999.45
396.00	400.00	400.00	.....	.....	400.00	400.00
26,864.00	26,971.42	30,032.17	3,060.75	19,807.47	10,224.70	30,032.17
154,110.00	132,066.54	132,066.54	.....	40,093.10	91,973.44	132,066.54
747,032.00	732,192.71	732,192.71	.....	524,985.83	207,206.88	732,192.71
223,396.25	449,998.47	310,000.00	139,998.47	58,647.01	251,352.99	310,000.00
39,560.00	40,000.00	40,000.00	.....	.....	40,000.00	40,000.00
3,410.00	5,000.00	5,000.00	.....	.....	5,000.00	5,000.00
234,067.00	60,000.00	60,000.00	.....	.....	60,000.00	60,000.00
.....	234,000.10	101,884.53	132,115.57	505,048.23	403,163.70	101,884.53
.....	50,000.00	50,000.00	.....	.....	50,000.00	50,000.00
.....	10,000.00	10,000.00	.....	.....	10,000.00	10,000.00
.....	88,000.00	88,000.00	.....	.....	88,000.00	88,000.00
.....	309,540.00	309,540.00	.....	2,350.00	307,190.00	309,540.00
388,148.20	399,720.43	399,720.43	.....	337,605.63	62,114.80	399,720.43
38,970.80	68,495.13	68,495.13	.....	67,691.76	803.37	68,495.13
10,956.00	11,639.61	11,639.61	.....	10,981.03	658.58	11,639.61
13,068.00	32,710.93	32,710.93	.....	27,893.26	4,817.67	32,710.93
20,020.00	22,319.46	22,319.46	.....	20,484.70	1,834.76	22,319.46
123,200.00	74,478.29	124,478.29	50,000.00	89,633.22	34,845.07	124,478.29
.....	.....	713,922.67	713,922.67	251,625.09	462,297.58	713,922.67
.....	.....	200,000.00	200,000.00	63,229.01	136,770.99	200,000.00
.....	42,843.53	42,843.53	.....	29,128.27	13,715.26	42,843.53
.....	.....	150,000.00	150,000.00	190,297.50	190,297.50	190,297.50
\$ 8,003,642.63	\$11,004,128.00	\$12,371,495.46	\$ 1,367,367.46	\$ 9,617,499.22	\$ 2,753,996.24	\$12,371,495.46



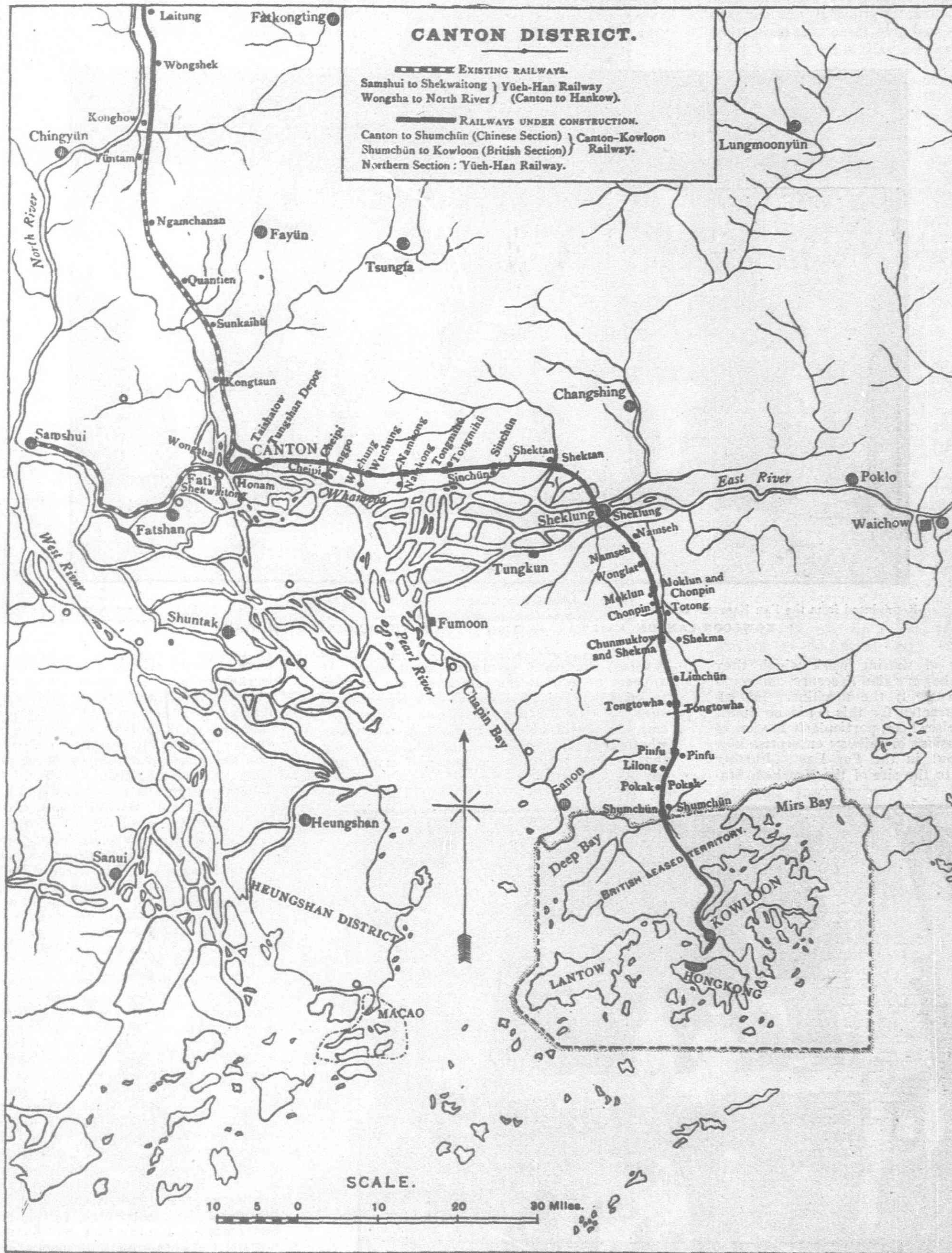
TYPICAL BRIDGE CONSTRUCTION ON THIS LINE

In the tunnel work great difficulty was met in securing labor, and the formation was of such a character that the engineers were often confronted with new and embarrassing conditions that could not be anticipated. It became

The new rolling stock recently arrived in the colony included two tank engines, six open bogie cars, six covered bogie cars, twenty-six covered four-wheeled cars, ten open four-wheeled cars, and two four-wheeled freight brake-vans. The Hongkong & Whampoa Dock Co., Limited,

were adopted, and decided that it would be more economical for the railway to have its own shops. This question was reopened and made the subject of some discussion at a recent meeting of the legislature. Mr. Hewitt, representing the unofficial members, in the course of a speech criti-

per cent., the actual expenditure to date being nearly twelve million dollars. We would ask to be informed how and from whom the material was purchased; if in the open market and at cheapest prices compatible with good material? Has any delay in opening the line been caused



Canton Trade Report, 1908.

secured the contract for the erection of the passenger cars and the work was delayed somewhat by the tardy arrival of the steel frame work.

The Hongkong Government considered the advisability of abandoning the railway workshops and placing the work with the large local engineering shops, before the 1910 estimates

cizing the increase in certain estimates with special reference to the railways, said:

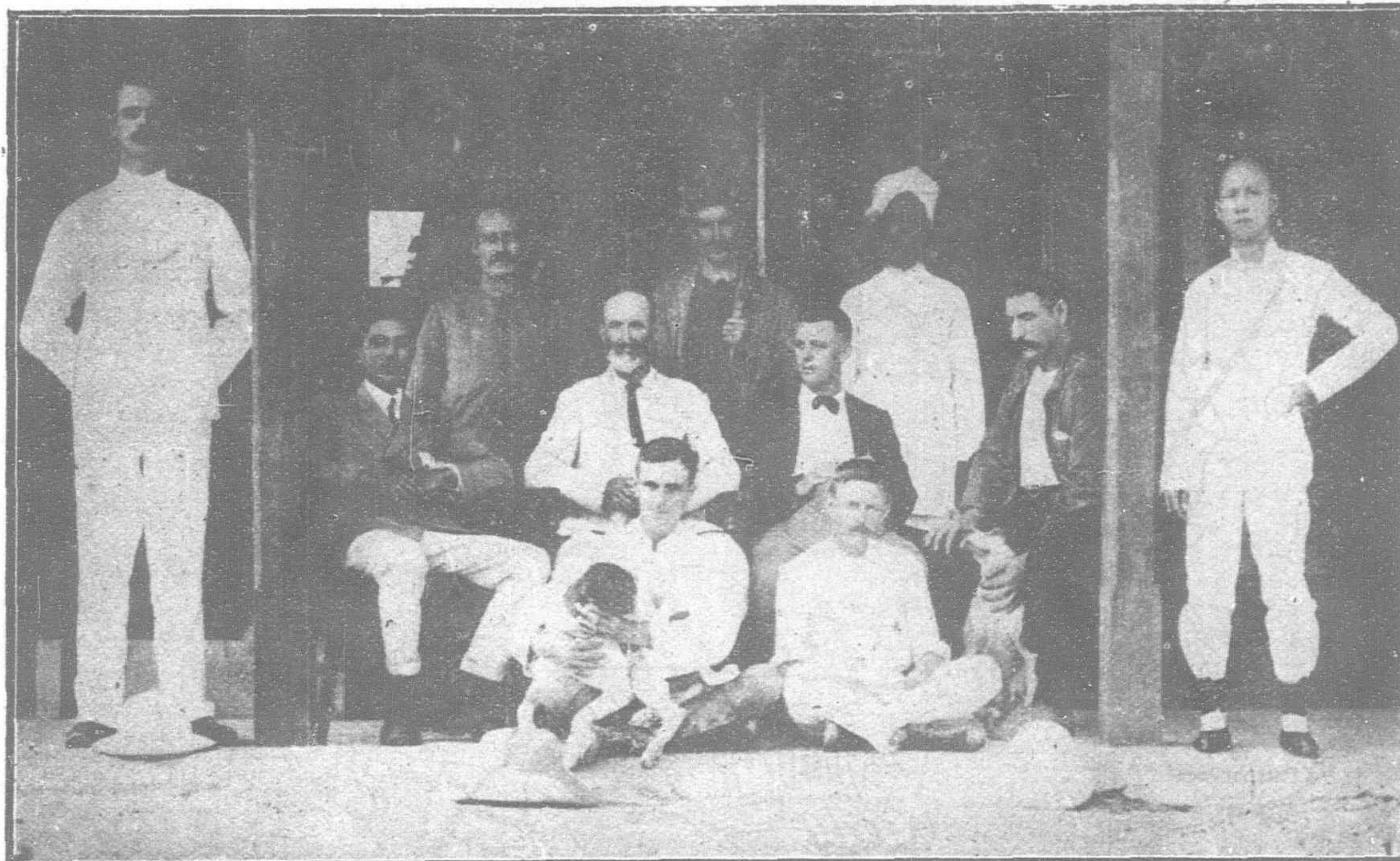
"There is only one more matter to which I will refer, the Kowloon Railway. Here again is a question concerning which we would like to have had further information. Again an estimate of eight millions has swelled up 50

by delay in the arrival of the rolling stock; and if so, will the loss thus incurred be made good by those responsible? Touching the workshops, which have not yet been set up, it seems on further consideration a moot point whether a railway of only some 22 miles is justified in incurring the heavy capital expenditure and

the heavy annual cost of running its own workshops. The greater part of the year the staff and machinery must be idle or very indifferently employed. We have two thorough, well appointed dockyards, in addition to the Naval Yard, each fitted with up-to-date machinery and a highly qualified staff. Why should not the Government effect the great saving which must result by abandoning the proposal of having their own workshops, and give these two institutions

tion would also be of great interest. Sir Matthew Nathan proposed to make the station on the eastern side of the peninsula, and for that purpose spent a considerable sum in resuming the site. Later, we understand, it was considered best by the Government advisers to place the station around the corner on the southern side, and for this purpose another large sum of money was spent in acquiring the necessary land. Now, however, it seems the station is to be on the site originally selected by Sir Matthew

In reply His Excellency said:
* "The hon. member made some reference to the railway estimates. I would remind him that in the estimates before us there is no estimate for railway construction. A vote was taken by resolution of this Council early in the year for the expenditure necessary in the current year, and a vote will be taken early next year for the remaining expenditure required to completion. These estimates are only concerned with the open line and stock. I may perhaps



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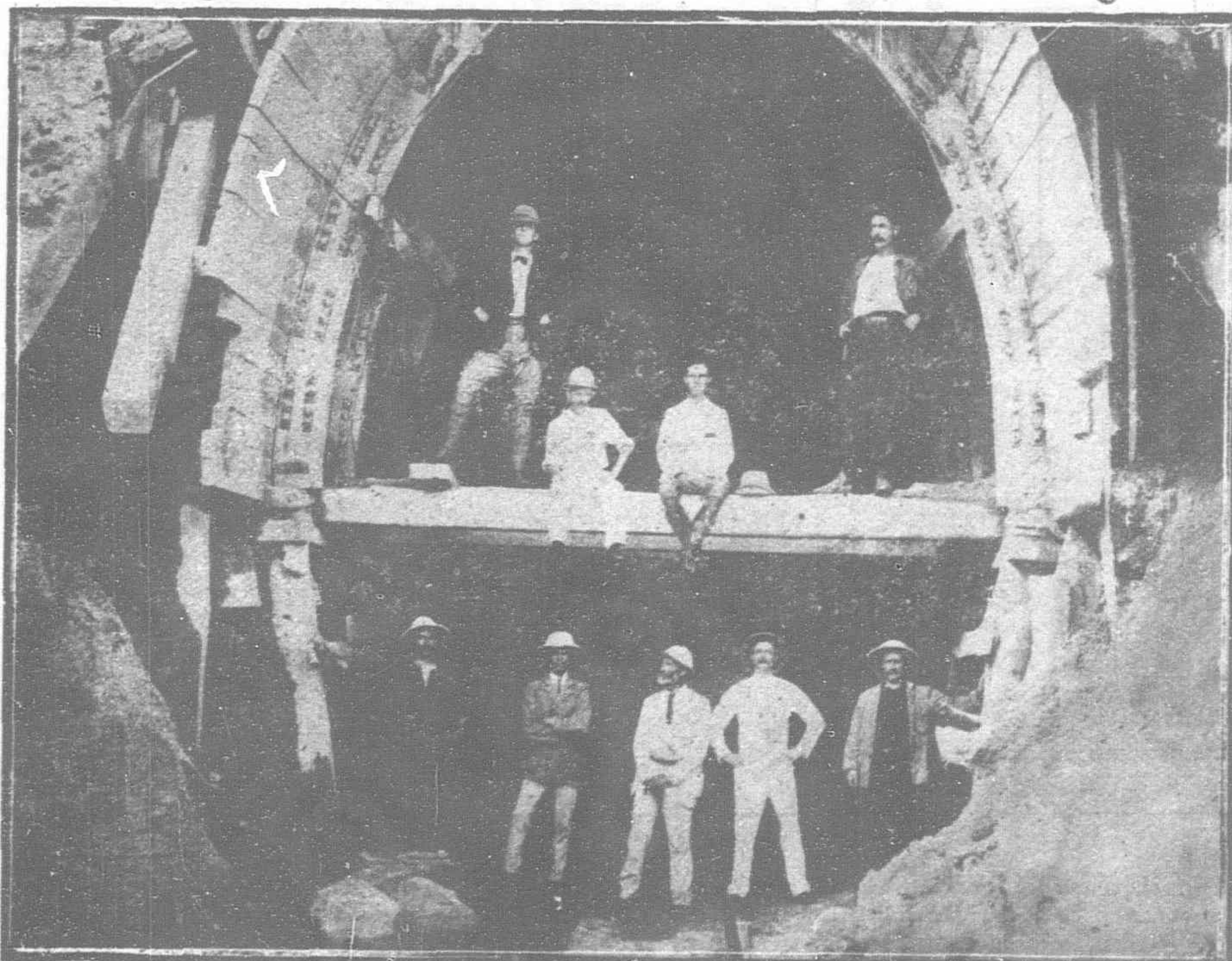
KOWLOON-CANTON RAILWAY, BRITISH SECTION, THE ENGINEERING STAFF

an opportunity of sharing work which they would no doubt be very glad to secure, and could efficiently perform? If the machinery has already been contracted for this could no doubt be disposed of elsewhere, particularly in view of the great expansions of railway enterprise now being carried out in the Far East. Further information as to the site of the Kowloon Sta-

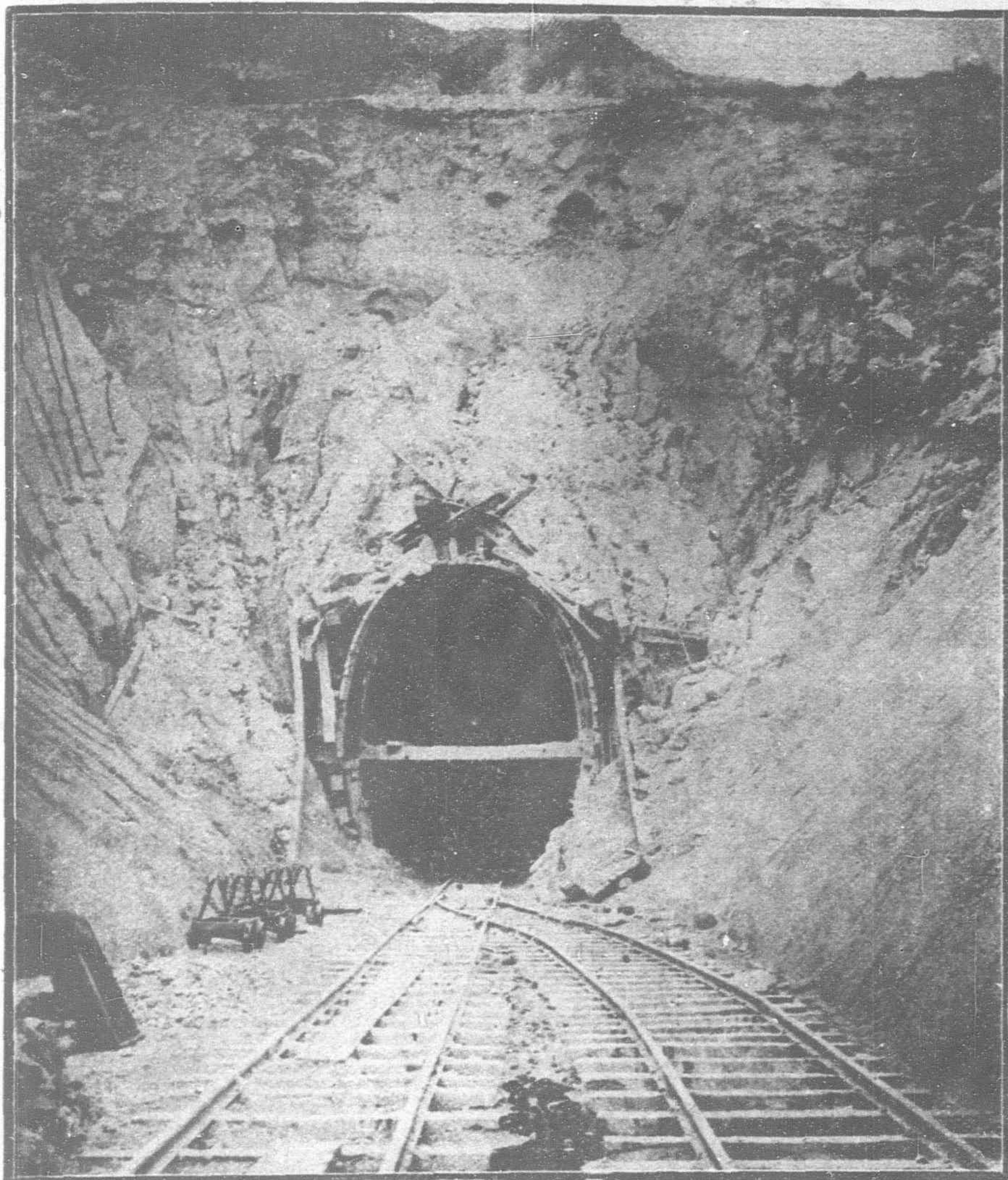
Nathan, thus fully justifying his decision. It appears to us that the ratepayers are entitled to know how much was paid for these various sites; to what use the Government intend putting the new abandoned site of the station and whether there is reasonable ground for believing that a proper return on the money thus invested can be secured."

mention, with reference to his suggestion that workshops were not necessary to the railway, that the Government did not overlook the possibility of dispensing with workshops and getting their work done in some of the engineering yards of the Colony, but after mature consideration they decided that it would be more economical to have their own workshops. The hon. member referred to the change in the site of the terminal station. His information on the subject is not quite correct. The site chosen by Sir Matthew Nathan is not the site that has been now fixed upon. Sir Matthew Nathan acquired the land known as Blackhead's Point for the double purpose of forming a railway station and deep sea wharf. There had been a considerable difference of opinion as to where the terminal station should be placed. As I have said, Sir Matthew Nathan wanted to place it at Blackhead's Point. Then it was decided to place it at Tsim Cha Tsoi, and land was acquired for that purpose. Then on further consideration it was decided that to save using that land for railway purposes it would be more economical to revert to a site which was suggested before Sir Matthew Nathan decided on Blackhead's Point, and that is somewhere in the neighbourhood of Gascoyne Road. It is the intention to place the terminal station there, and for the present at any rate to have a flag station at Tsim Cha Tsoi. The result will be that the land which has been acquired at considerable cost at Tsim Cha Tsoi will be available for the Government to dispose of otherwise. I do not think, gentlemen, that there is any point I have left uncovered, but if there is any further information hon. members require they will have every opportunity of obtaining it in Finance Committee."

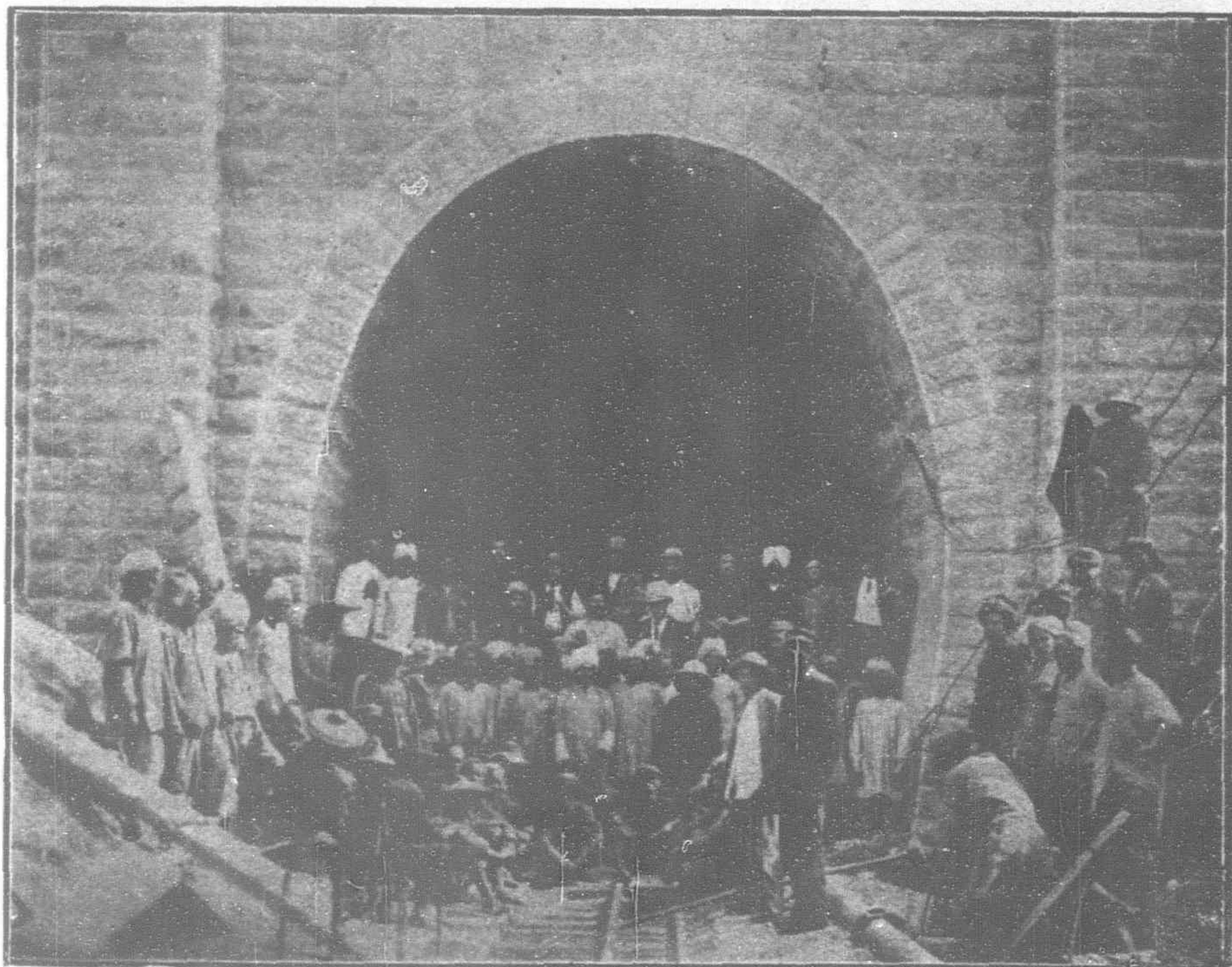
Provision for a ferry service between the city of Victoria and the railway pier at Kowloon is given attention in a recent issue of the Government Gazette in the form of an advertisement for tenders with respect to the lease of a site and the construction of a pier opposite Ice House Street. This pier is to have minimum dimensions



KOWLOON-CANTON RAILWAY, BRITISH SECTION, ENGINEERING STAFF AT TUNNEL HEAD



KOWLOON-CANTON RAILWAY, BRITISH SECTION, ENTRANCE TO BEACON HILL TUNNEL.



Reproduced from F. E. REVIEW.

KOWLOON-CANTON RAILWAY, BRITISH SECTION, FINISHED ENTRANCE TO BEACON HILL TUNNEL

of 150 feet by 50 feet to be built within twelve months, and to maintain the present pier during the construction of the new one. Upon the completion of the line to Canton and of the railway pier at Kowloon a ferry service is to be maintained that will conform to the time table inaugurated, carrying passengers and

mails under proper bonds to insure the satisfactory performance of the terms of the contract. The concessionaire will have the sole right to the railway ferry service from any or all of the three points in Victoria, viz: The pier opposite Ice House Street, a pier in the Central or Western District, and a pier in the Eastern District, or

may combine the service from the Ice House Street and Central or Western pier instead of a direct service from each pier to the Kowloon railway pier.

Three properly equipped steamers will be the maximum number required for each service. The capacity of these steamers for the pier opposite Ice House Street and the Western or Central pier must have a minimum carrying capacity of 300 passengers and for the Eastern pier a capacity of 150 passengers.

The fares are fixed at adult first class, 15 cents, half fare 5 cents; second class, 3 cents; third class, 2 cents, day service, and 3 cents, night service.

The inauguration of the service will not be required until such time the government is satisfied that the revenue will cover expenses, etc.

It is expected that the Chinese section will be opened to Canton by August next year. Work has been progressing more favorably during the last year and approximately 40 miles from Canton are now open.

With the opening of the British section the construction on the Sanchun end will be expedited by the increased transportation facilities afforded for the forwarding of material. Work trains may proceed from Sanchun as the line is built from that end. The work on the terminal station at Tai Sha Tan has progressed satisfactorily and other building construction is well up to the general progress made.

The large number of bridges in the central division between a point 29 miles from Sanchun and the end of the line open from Canton has involved great expense and much time. Between the bridges, however, construction work is well up and their completion at an early date will bring the open line from Canton to the 50 miles point. By that time it is expected that the 29 miles from the British boundary will have been completed and there is prospect that the time set for the opening, next year, may be anticipated by a couple of months.

The time table put in force, October 1, on the British Section provides trains each way on week days only; one down train on Saturdays and Sundays and a down train running Mondays, Tuesdays and Wednesdays, while in addition to the two up trains, there is one that covers the line every day. This arrangement makes in all seven trains initiated the first week of this month. The time table published in the Government Gazette follows:

DOWN TRAINS.

No. of Train.	1	3	5	7
	a.m.	a.m.	p.m.	p.m.
Kowloon, Departure.....	8:30	2:30	4:00	
Hung Hom, Arrival.....	8:33	2:32	4:03	
Hung Hom, Departure..	5:25	8:38	2:35	4:08
Yaumati, Arrival.....	5:31	8:44	2:39	4:14
Yaumati, Departure.....	5:35	8:49	2:40	4:19
Shatin, Arrival.....	5:47	9:01	2:52	4:31
Shatin, Departure.....	5:48	9:06	2:53	4:36
Taipo, Arrival.....	5:50	9:18	3:05	4:48
Taipo, Departure.....	6:05	9:30	3:07	4:58
Fan Ling, Arrival.....	6:15	9:42	3:19	5:10
Fan Ling, Departure....	6:20	9:47	3:20	5:15
Lowu, Arrival.....	6:30	9:58	3:35	5:24

No. 1 Train runs on Week days only.

No. 3. Train runs on Week days only.

No. 5 Train runs on Saturdays and Sundays only.

No. 7 Train runs on Mondays, Tuesdays, and Fridays, but will not run on Saturdays and Sundays.

UP TRAINS.

No. of Train	2	4	6
	a.m.	a.m.	p.m.
Lowu, Departure.....	6:40	11:00	5:35
Fan Ling, Arrival.....	6:49	11:09	5:45
Fan Ling, Departure.....	6:54	11:14	5:46
Taipo, Arrival.....	7:06	11:26	5:58
Taipo, Departure.....	7:16	11:36	6:08
Shatin, Arrival.....	7:28	11:48	6:02
Shatin, Departure.....	7:33	11:53	6:23
Yaumati, Arrival.....	7:45	12:05	6:35
Yaumati, Departure.....	7:50	12:10	6:39
Hung Hom, Arrival.....	7:55	12:15	6:44
Hung Hom, Departure....	8:00	12:20	6:45
Kowloon, Arrival.....	8:03	12:23	6:47

Nos. 2 and 4 trains run on week days only

No. 6 train runs on week days and Sundays.

Opening of the Iloilo-Capiz Line of the Philippine Railway Co.

August 28, 1910, marked the beginning of a new era in the history of the development of the rich resources of the island of Panay. It was the occasion of the formal opening of the through line running across the fertile

The last pile was driven on August 11 at bridge No. 607 between Dao and Calaan, and it was at the approach to this bridge on August 28 that the four golden spikes were driven that inaugurated the railway. To be

with baggage car, hauled by a Baldwin locomotive, carried the Secretary of War and party from Iloilo. Secretary Dickinson was accompanied by General Clarence R. Edwards, Chief of the Bureau of Insular Affairs, and Governor



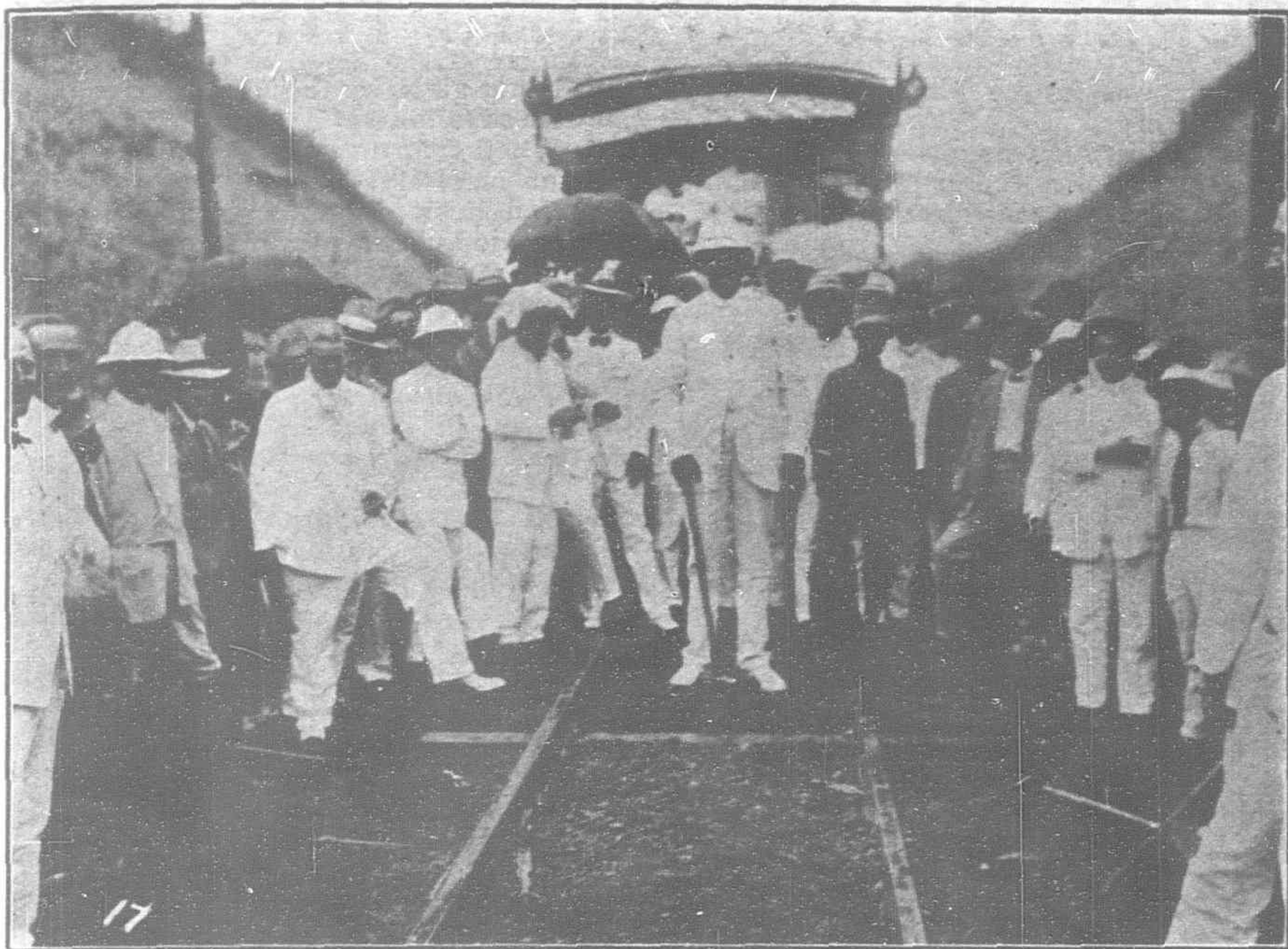
Courtesy Manila Bulletin.

island and connecting the cities of Iloilo and Capiz, by Secretary of War Dickinson, assisted by Governor General W. Cameron Forbes, Governor Altavas of the province of Capiz, and Governor Ruperto Montinola of the province of Iloilo.

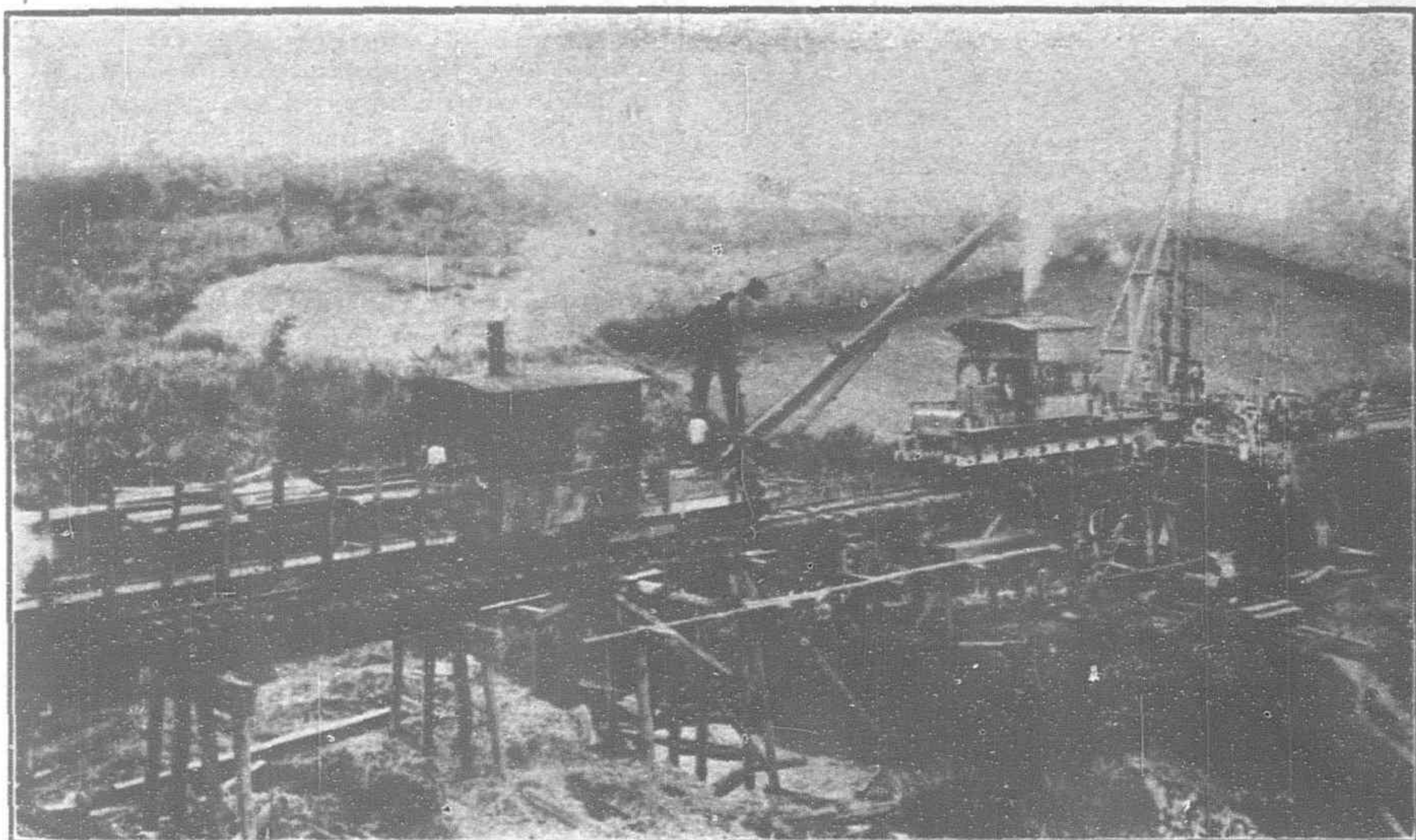
exact, the rail ends connected at kilometer 96 from Iloilo and kilometer 20.4 from Capiz, the total length of the line being 116.4 kilometers.

A special train of seven coaches, including a parlor car, first class and second class coaches

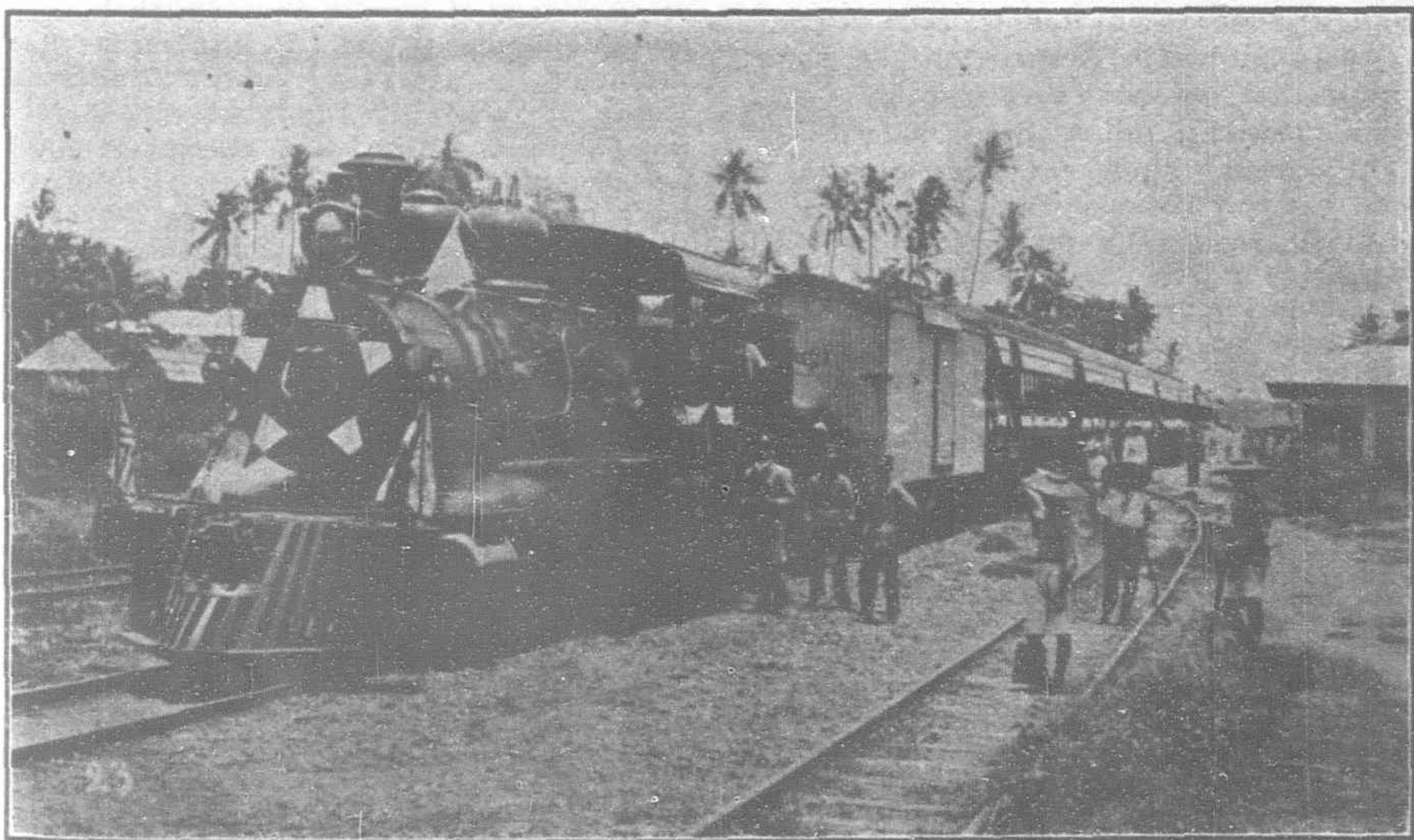
General Forbes. Governors Altavas and Montinola joined them at Iloilo. Among the officials of the Philippine Railway Co. present were Mr. W. B. Poland, Vice-President and Chief Engineer; Mr. Alexander Strausz, jr., Auditor; and Mr. Edwin B. Bruce, General Attorney.



SECRETARY OF WAR DICKINSON DRIVING THE LAST SPIKE IN THE PANAY RAILWAY



DRIVING THE LAST PILE AT BRIDGE 607, WHERE CEREMONY TOOK PLACE



SECRETARY OF WAR'S SPECIAL TRAIN AT POTOTAN ON THE PANAY LINE

The first spike was handed Governor General Forbes, who on behalf of the Insular Government initiated the ceremony, and was followed by Governors Altavas and Montinola, whose spikes were driven to place the seal of their approval on the line that bound their respective provinces together. The fourth spike was driven by the Secretary of War, who declared the road formally opened to traffic.

The party then proceeded to Capiz, where a banquet was spread.

In welcoming the Secretary of War to Capiz province, Governor José Altavas said in part:

"This day is doubly memorable because of two important events,—the visit of the official representative of the sovereign country and the inauguration of the railway from Capiz to Iloilo. If the first is important on account of the fact that the Filipino people expect from this visit positive benefits, no less important is the second event, which solves the problem of transportation between the sister provinces of Panay, and it is hoped will initiate an era of prosperity. We also extend our welcome to the Honorable Governor Montinola of Iloilo and his distinguished party from our sister province. I hope that this meeting in this town, which is a true representation of the Panayan people, will be an earnest of our future union." Other speakers followed and among them Governor General Forbes, who said:

"We have today opened a railroad between Capiz and Iloilo. This places upon every person in the provinces of Iloilo and Capiz the duty of making the railroad a success, to justify the government in having assumed the burden of having to pay interest on the immense amount of money which has been spent here in the construction of this line, in order that the companies that have constructed railroads in these islands may be tempted to build other lines and extend their operations in such a way as to bring the benefits that will surely follow, to more people.

"The future of railways in the Visayan Islands is today based on the measure of success which shall be found here in these two provinces. As soon as the success comes which I feel confident will attend the construction of this line, other lines, I am sure, will follow, and I believe that the construction of these lines will be a bond between the different races and the different parts of the Philippine Islands, until all of us will see the day when we have a people in these islands with one common language, with common interests and with common ideals."

The Secretary of War was then introduced and, after referring to the value of railways in opening up and developing a country, illustrated his point by the history of western development on continental America. Continuing he said:

"Your prosperity and the prosperity of the railroad company are bound to go hand in hand. You cannot be prosperous without its being prosperous, and it cannot be prosperous unless you are prosperous. Therefore, there ought to be that wholesome co-operation between the people of the country and the railroad which will bring the country as rapidly as possible to its fullest development.

"There was a time in the history of the American people when in their anxiety to get railroads, improvident powers were granted to them, and the railroads forgot that they were public servants, charged with public duties, and got into an attitude which brought about great hostility at times between certain of the railroads and certain sections of that country. Profiting by that experience, those who drew your railroad laws have guarded against any such possibility, and therefore there is no reason why there should be distrust between the railroad company and the people of the Philippine Islands. Your laws have been so carefully framed that there is no possibility, even if the railroads should attempt to do it, for them to arrogate any dominancy over the people of this country. You do need in this country capital for development. That your people

VISIT OF AMERICA'S SECRETARY OF WAR TO THE ORIENT

Great significance is attached to the recent visit of the Honorable J. M. Dickinson to the Philippines on official business connected with the dependency, by Americans in the Archipelago while not a little interest has

However, it was in the Philippines where his presence served the great measure of good, especially in removing misapprehension as to America's policy there. He found that a large section of the ignorant population

his honor given by the Filipino reception committee as follows:

"Whether fortunately or unfortunately, wisely or unwisely, the American people have entered upon such a career in the East as in the judgment of very many of her people makes it impossible for her to assume any attitude in the future toward the Philippines which will not guarantee their independence of all foreign nations. This necessarily involves, if accompanied with local self-government by the Filipinos, much higher development and governmental capacity than would be necessary for a state of complete isolation. It would also mean the maintenance of such relations between the United States and the Philippine Islands as would insure their not becoming involved in international affairs. Unless the United States should adopt the radical policy of severing all relations with and responsibility for the Philippines, the above considerations and the character of development which they involve cannot be left out of view. It must be borne in mind by those who manifest impatience that while from the very force of inertia a present status in a matter so complicated may continue from year to year, no fundamental change is likely to come about until after the whole question shall have been discussed and considered by the American people, and presented as an issue. That has never been done except in a general way. If the question shall be taken up now for solution, it will, in all probability, looking by the lamp of experience, be one of slow progress. It is complicated and the considerations are so vast that they would demand and probably would receive deliberate consideration. Now I have only gone into this discussion for the purpose of inviting the calm and temperate judgment of those who are asking for immediate independence upon the real character of the problem, and for the further purpose of urging that however loud and insistent the cry for independence may be, no one who has the real welfare of the Philippines at heart will neglect, in grasping at what from the conditions will necessarily be a receding shadow for a long time to come, the real substance, which is the development to the highest degree possible under present conditions of everything that will tend to broaden the foundations for fearing Philippine independence.

"I know full well that all of your political parties have the purpose to achieve independence for the Philippines. I respect this ideal, and if I were a Filipino would sustain it, but I would pray to be guided by that wisdom which would help me to lead my people in the way that would certainly achieve it and would erect it as a stable structure upon foundations that would make it perpetual.

"It involves much more than superficial thinkers imagine. It means a reconstruction of the ideas of government which have been familiar to your people. It involves large social problems."

But it was at Zamboanga, where the inordinate ambition of a clique of political agitators found expression in the form of a bold proposal to turn over the direction of the affairs of Moroland to the Philippine legislature, that a climax was reached and a difficult situation adjusted by the Secretary with a firmness that made a deep and lasting impression upon Moros and Filipinos and inspired greater confidence among the foreign and American pioneers in the future of Mindanao. It will be remembered that for several years the transfer of the control of Moro affairs to the Philippine legislature has been agitated by an ambitious group of Luzon natives and these politicians believed that the hour had arrived with the visit of Secretary Dickinson to bring matters to a focus. This they did at Zamboanga at a public session, there being present a large number of Moro chiefs and local Filipino settlers. The speeches of the Filipinos boldly demanding control were interpreted into English and Moro and as the Christian politicians progressed in



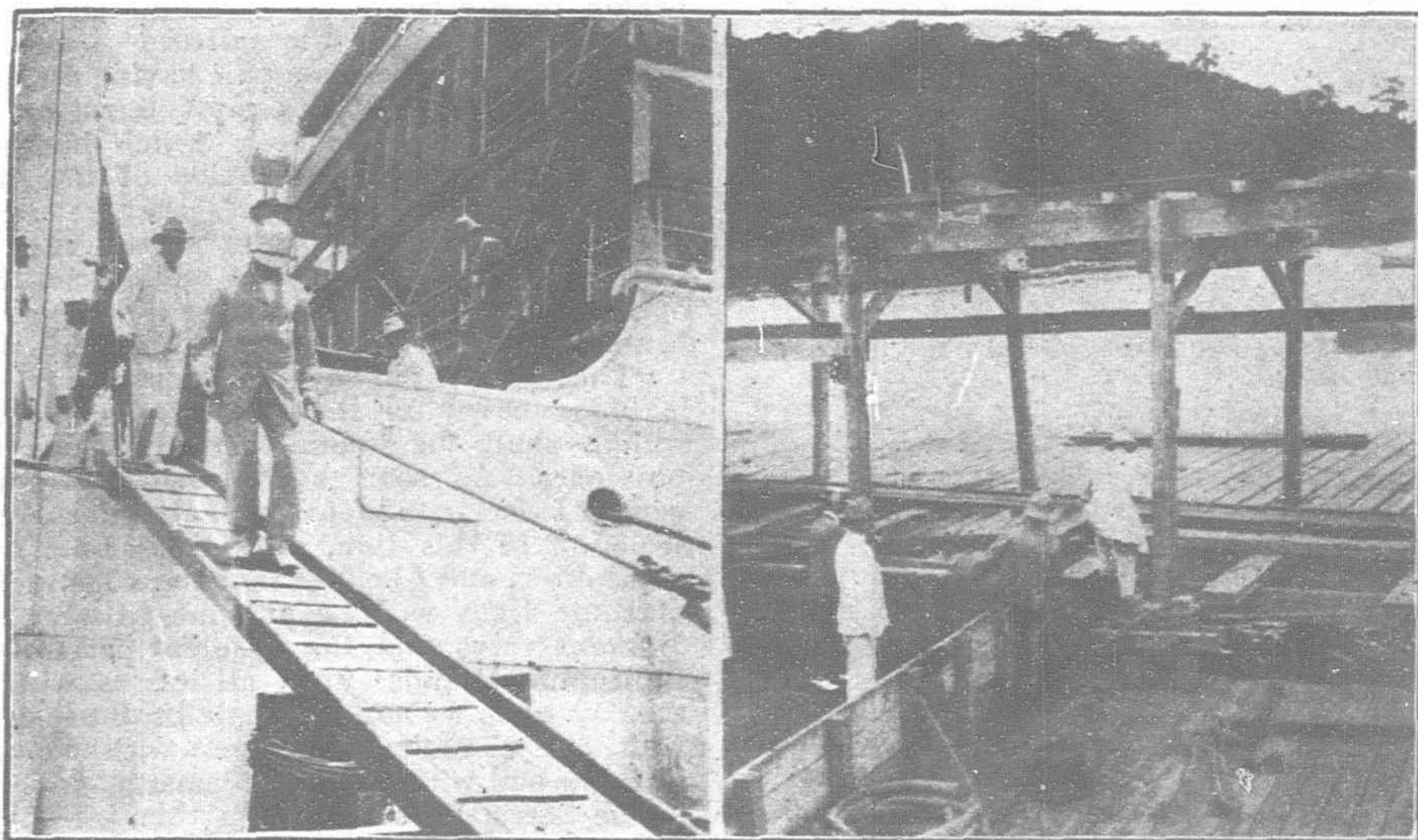
Courtesy R. D. Fergusson, Esq., Chief Translating Division.

PROCESSION OF MORO CHIEFS IN HONOR OF SECRETARY DICKINSON AT ZAMBOANGA

been taken throughout the East in his short sojourn at Tokyo, his welcome at Peking and his return journey through Russia.

It is not often that a cabinet officer of the United States finds time during his tenure of office to enjoy a tour of the globe, but

had been misled by a few unscrupulous agitators into the belief that as Secretary of War he was empowered to grant them independence. It took some effort to disabuse the native mind of this idea and to impress it with a realization of the restricted powers



Courtesy R. D. Fergusson, Esq., Chief Translating Division.

SECRETARY DICKINSON AND GOVERNOR GENERAL FORBES GOING ASHORE AT ZAMBOANGA

INVESTIGATING GOVERNMENT COAL MINES AT BATAN

Secretary Taft established the precedent and it was only natural that the most distinguished member of his cabinet should follow his example. And indeed, in Tokyo as in Peking, we find Mr. Dickinson a strong supporter of President Taft's policy as outlined in the latter famous Shanghai speech.

will have the aptitude and capacity to avail themselves of their opportunities I feel quite confident, from what I have seen in traveling over these Islands.

"While capital should never be put in a position of mastery, on the other hand there should be given every assurance that vested rights will be respected and that people who invest their money will receive fair and just treatment. (Applause.) You have a magnificent country. I have never seen a more beautiful country in my life than that I traveled over in riding from Iloilo to Capiz. (Applause.) Your opportunities, however, for development are restricted, and your men of enlightenment, breadth and foresight should take all proper and wholesome steps to get capital for development to your islands."

of a cabinet officer. No doubt, the small agitator group maliciously misled the people in the hope that serious manifestations of disappointment would follow their disillusionment. The Secretary, however, made a triumphant tour and, to the chagrin of the agitator class, received a general expression of loyalty and appreciation of America's beneficent rule. Even those who were misled to expect independence among the Secretary's baggage, demonstrated that they had a fair apportionment of the saving grace of humor in their appreciation of the ridiculous position of the few unwise agitators when the character of the coup was exposed.

Throughout his tour of the islands the Secretary encouraged all classes to freely express their views; to discuss any feature of administration they believed deserving of criticism and to submit complaints. To all he accorded sympathetic attention and promised the fullest investigation. His attitude throughout was in fullest sympathy with the legitimate aspirations of the people and may best be summed up by quoting a few paragraphs in his last address at a popular banquet in

outlining their ambition the faces of the Moro chiefs were not good to look upon and it is not improbable that a serious clash would have followed disastrous to the Filipinos had the speeches been made without ample military protection.

The Filipino speakers were followed promptly by several of the Moro chiefs whose una-

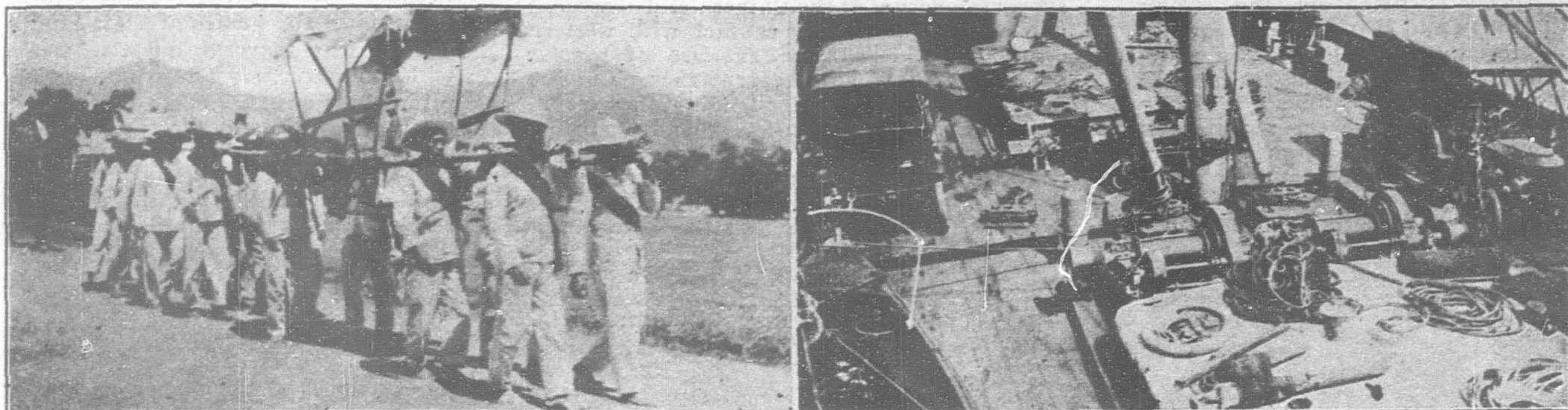
over to another race, we had better all be hanged." (Applause).

Hadji Nungnui spoke as follows:

"I want to tell the Secretary of War that I am a Samal. I come from the Samal race. The Samal race,—in former days there was not a worse race than the Samal race; and that was in the olden days. Even since the

Spanish times up to now we have learned different.

"The Secretary of War must look the matter in the face. We are a different race; we have a different religion; we are Mohammedans. And if we should be given over to the Filipinos, how much more would they treat us badly, when they treated even the Spanish



Courtesy R. D. Fergusson, Esq., Chief Translating Division

SECRETARY DICKINSON IN PALANQUIN CARRIED ON SHOULDERS OF NATIVES OF IWAHIG PENAL COLONY

DECK OF THE S. S. RIZAL SHOWING AUTOMOBILES AND MOTOR BOAT USED DURING SECRETARY DICKINSON'S TOUR OF THE PHILIPPINES

nimous protests were promptly and unequivocal as the following quotations indicate:

Datu Mandi:—"I am here, El Raja Mura Mandi, representing the Moros. Here they are, the whole crowd of them, come to honor the Secretary of War. As I look about, I see far more Moros than the Filipino contingent, and if that is so, that is the reason it is called the Moro Province. (Tremendous applause from the Moros.)

"When first the Americans came here, from the very beginning, whatever they asked me to do I did. I was loyal to them ever. Now I have heard a rumor that we Moros are in the hands of the Filipinos.

"In the Spanish times I was a Datu—(when the Spanish left this became a republic). Then I saw and found out that things did not go well. When a man had two measures of rice one was taken away from him; when a man had two head of cattle one was taken away from him (Applause by the Moros.)

"If the American Government does not want the Moro Province any more they should give it back to us. It belongs to us." (Tremendous applause by the Moros.)

Datu Sacaluran spoke as follows, his remarks being interpreted in English and Spanish:

"I am an old man. I do not want any more trouble. But if it should come to that, that we shall be given over to the Filipinos, I still would fight." (Applause.)

"Ulangaya" Ujaton spoke as follows:

"I am not a civilized man, but I have learned that slavery, killing and stealing is a bad thing. We do it no more. But if after that it should be that we shall be given



Courtesy R. D. Fergusson, Esq., Chief Translating Division

DATTO PANGLIMA DIKI-DIKI, CHIEF OF TRIBE OF MORO DWARFS ON ISLAND OF UBIAN, SULU GROUP

badly who were their own mothers and their own fathers in generation? How did they treat them? Think about it! Think twice! We far prefer to be in the hands of the Americans, who are father and mother to us now, than to be turned over to another people." (Applause.)

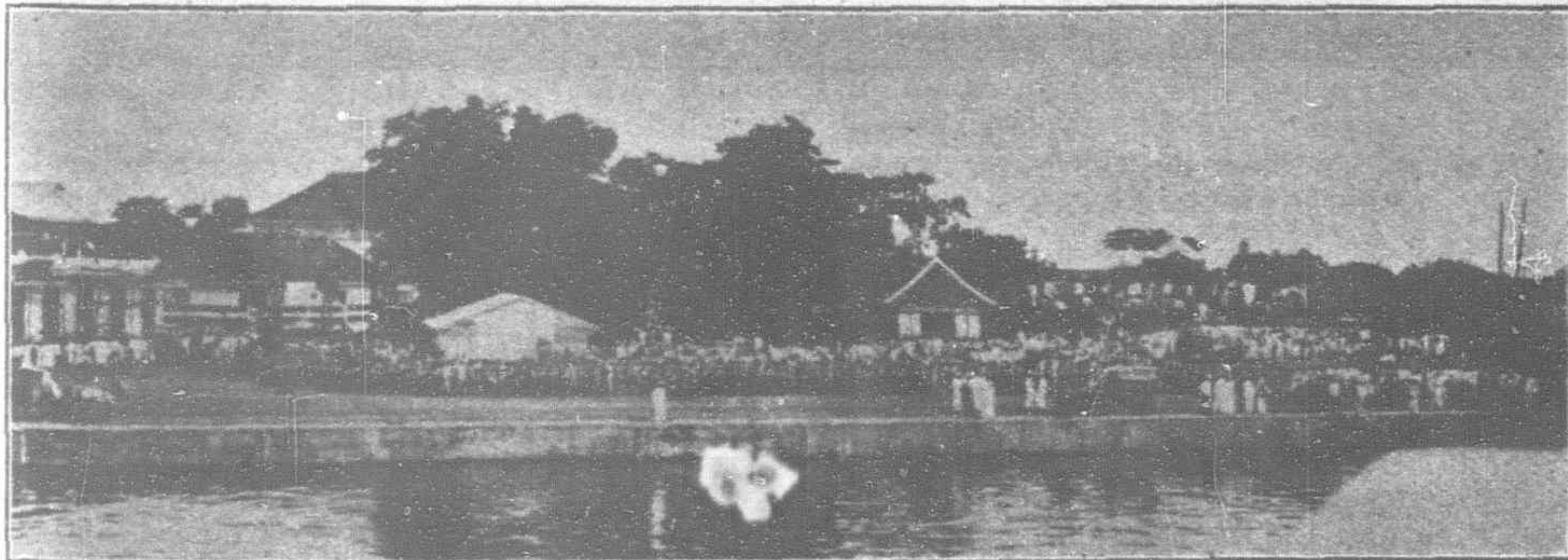
An echo of this incident finds expression in the *New York Sun* which indicates that certain sections of America are becoming better informed of late on the status of the islands and that a healthy sentiment is growing in support of the administration policy there. The *Sun* says:

"United States troops have never failed to overwhelm the Moros in battle, and as a people they have been conquered, if not subjugated in that sense in which the term may be used with regard to the Filipinos of Luzon. The Moros have not been tamed, their morals are unregulated, and they remain Mohammedans hating the Christians. Their desire for annexation to the United States when the Filipinos secure independence, as that desire was tumultuously expressed in the presence of General Dickinson at Zamboanga, was merely a crafty rejoinder to the Christian Filipinos. The Malay yields only to force, and must be watched when he seems most submissive and loyal. A Mohammedan of Mindanao will never sit in the Senate at Washington. If in the fulness of time absolute independence is granted the Christians of Luzon and the Filipinos as a people, it will be necessary to keep the American flag flying in Sulu and Mindanao."

Altogether, Secretary Dickinson's visit has not only served to aid to strengthen America's hand in the Philippines and to more firmly establish the cordial relations between America and Japan but his visit to Peking, where he was accorded exceptional honors, has served to greatly advance American interests in the Empire.

Commenting on the Peking visit the *Kobe Chronicle* says:

"At a reception given in his honor by the princes of the imperial family in the palace yesterday, the private parlor of the emperor was used for the proceedings. This is unprecedented in the history of China. The Chinese, learning of Mr. Dickinson's sympathetic attitude to China and his praise of Chinese institutions, are even more satisfied at this than are Mr. Dickinson and his party at the cordial reception afforded them. The influence of the pro-American section of the Chinese government is expected to increase as a result of Mr. Dickinson's visit."



Courtesy R. D. Fergusson, Esq., Chief Translating Division

NEW WATERFRONT AT CEBU WHERE DICKINSON PARTY LANDED.—32 FEET OF WATER ALONGSIDE

THE CANTON-HANKOW RAILWAY

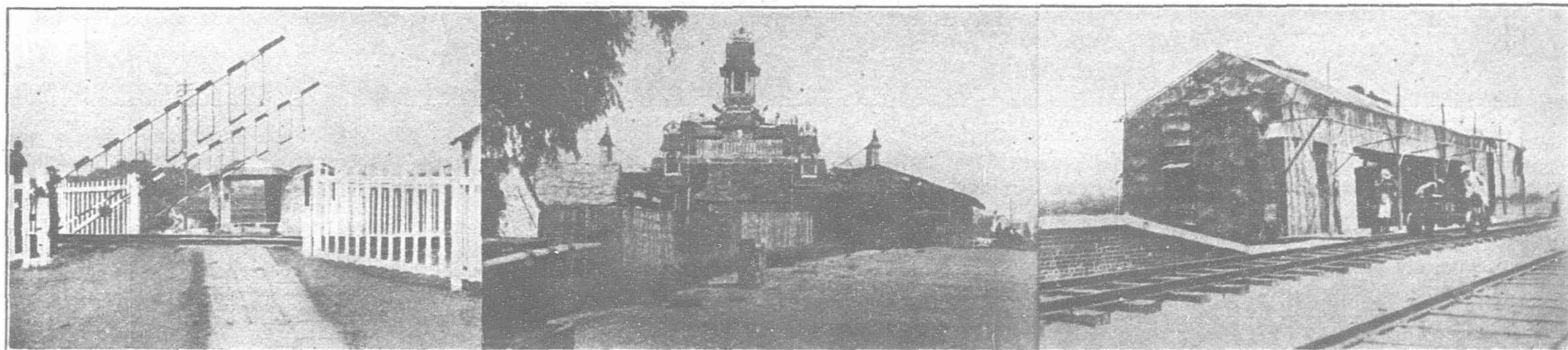
The latest advices from Peking offer little encouragement for an early conclusion of the foreign loan to cover the construction of this line through Honan and Hupeh as well as of the Szechuen line. Indeed, not a few authorities are of the opinion that the agreement pending will never be concluded. One of the reasons advanced is based on the strong sentiment in Honan and Hupeh against foreign money and foreign supervision. So widespread is this feeling that Peking realizes the wisdom of temporizing at this time.

We have some evidence in the recent news items that contracts with foreign engineers would not be renewed by the Kwantung Yueh-Han Railway, that Hunan and Hupeh are not wanting in moral support from Kwangtung.

and native prejudice, and soon his manner is expressive of his mental attitude. The Chinese naturally resent what they term lack of consideration and co-operation is then impossible.

Chinese engineers educated abroad are of the opinion that much of the anti-foreign feeling is due to the lack of consideration shown the wishes of the Chinese and disregard of Chinese customs in conflict with western commercial ideas. The exercise of greater patience and tact with an acceptance of Chinese methods as a basis of understanding, they claim, would greatly assist the foreigner in carrying out just such projects as the Canton-Hankow Railway. If the foreigner would bear in mind that he is not building a railroad for foreigners but for the Chinese and that the latter, after

tively recent birth, is wielding a mighty influence in moulding public opinion. This striking change in the national spirit of the people would not be regarded as surprising when it is remembered that conditions in the Empire were quite different then from what they are now. Broadly speaking, the Chinese focused their interests in the affairs of their family circles, outside which everything else was regarded with indifference. They held firmly to the principle of minding one's own business. With the rapid changes, not to say progress, she has undergone, however, the China of to-day is not the same China as that of ten or twenty years ago, and as affairs within her borders have reached such a stage that her people are at last



Courtesy J. S. Goodell, First Asst. Engineer.

CANTON-HANKOW RAILWAY CROSSING GATE AT SAI CHUEN

WONGSHA TEMPORARY STATION

TEMPORARY STATION AT LIN PING

That the three provinces are of one mind with regard to foreign loans is admitted by those familiar with the attitude of the directors of the Kwangtung Company.

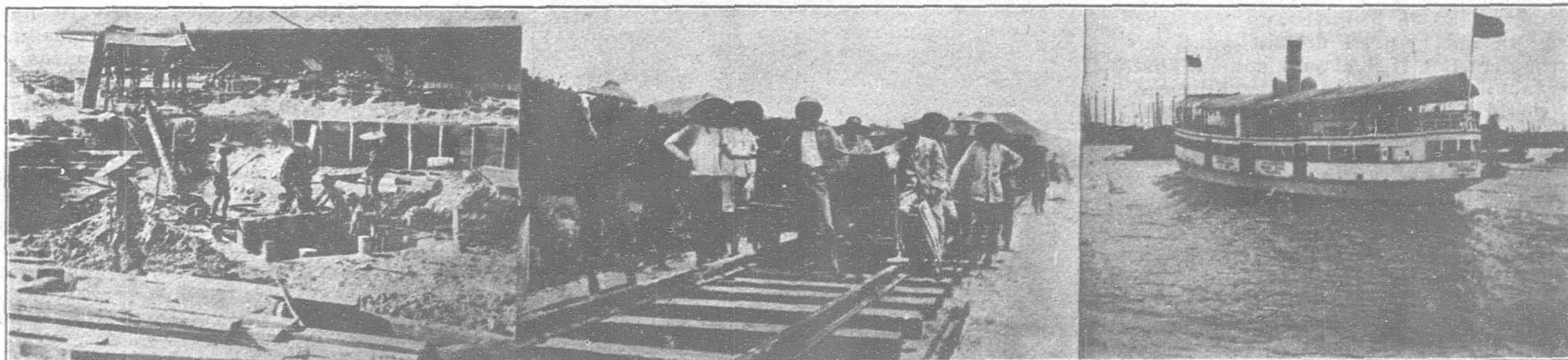
Foreigners usually criticize the methods of Chinese in carrying on railway construction especially with respect to organization and direction. In reply the Chinese officials point to the fact that the Chinese people are footing the bill, and if there is delay the loss must affect the Chinese more seriously than the foreigners interested. They say that they realize the necessity of railways and in their

all, are the people who have the greatest interest in the success or failure of such an enterprise, he would go no further than to proffer advice in such a manner as to invite confidence and the greatest possible measure of co-operation.

Chinese sentiment in Hunan may be said to be almost a unit in favor of the construction of the line with Chinese capital. The following communication published in the *Peking Daily News* reflects the spirit that prevails there:

"The question of foreign loans for industrial, commercial, and railway development in China

compelled to adopt a different policy, they are determined to ascertain what is wrong with their country and to devise methods for its remedy. By establishment of numerous modern schools and colleges in the various provinces, western learning is fast spreading throughout the land, and the people, taught by the experience of past and present events, are beginning to see as they never saw and to think as they never thought before. They are constrained to use their eyes and ears and reasoning faculties in the hope of improving China and of



Courtesy J. S. Goodell, First Asst. Engineer.

CANTON-HANKOW RAILWAY. CONSTRUCTING CONCRETE CENTER PIER OF TURNTABLE AT WONGSHA

END OF TRACK. SECTION B. RESIDENT ENGINEER SHERWIN ON CAR

FERRY BOAT YUH LEE OWNED BY THE RAILWAY COMPANY OF THE THREE PROVINCES

own good time they will be built. This attitude is largely due to the lack of tact on the part of many westerners in dealing with Chinese officials.

The western engineer is anxious to enforce his standards and to expedite construction. He is interested in the success of the enterprise and he cannot sympathize with an administration that does not appreciate the various elements that enter into economical direction. He grows impatient of petty local disputes

is one of the most burning problems with the Chinese at the present day. It has troubled and is still troubling their minds, and every endeavour is being made to settle it by means that will produce the most satisfactory results both to China and the foreign syndicates concerned. A decade or so ago the people paid scarcely any attention to any question of this kind; now it is on the lips of every thinking Chinese and forms the great theme of discussion in the Chinese Press, which, though of compara-

freeing her with the help and advice of foreign friends who are deeply interested in her well-being. Foreign loans of the kind above mentioned are viewed by the Chinese in two different ways; either as one of the harmful agencies or, if properly contracted and the terms of the agreement be strictly adhered to, as a great blessing to the country. China, as pointed out and emphasized from time to time in the Chinese Press, has no objection whatever to legitimate foreign loans—in fact such loans

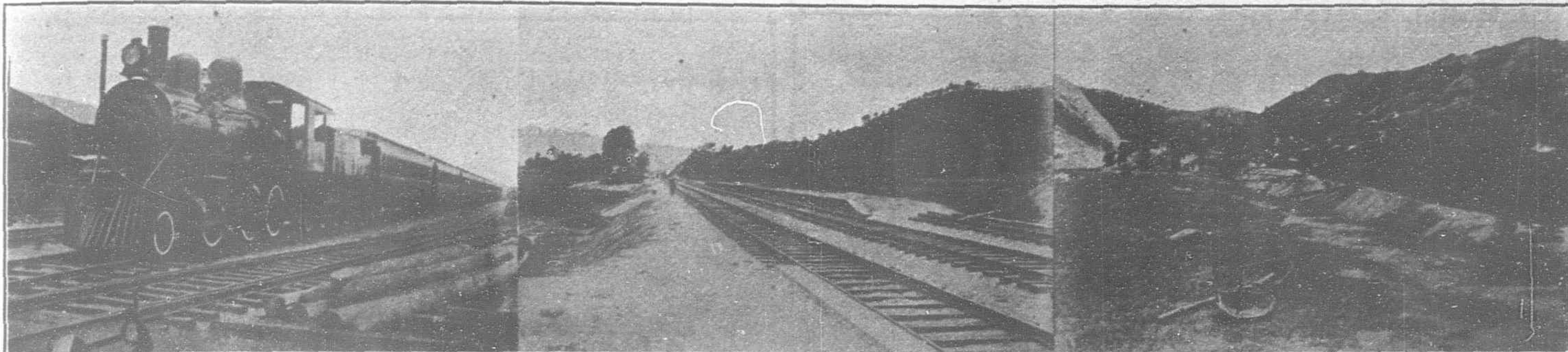
are welcome; it is only against foreign loans for securing political or semi-political rights or with ulterior motives that China objects to, and should object to with all her power, for, as has often been the case, it would surely involve her in serious trouble which would end in the loss of her rights and interests.

The Chinese have often tried to show what harm foreign loans of the latter description might do to China by citing the case of the late American Development Company, which has left a deep impression on their minds.

made directly in response to the appeal of the members of the Local Legislative Assembly of Hunan.

These members, who are nominated by the people, and are therefore their representatives, after having solemnly undertaken to perform the duty of persuading the people to subscribe capital for the construction of the railway, at once set to work with a view to procuring the desired results. They traveled everywhere, making stirring speeches in which they pointed out the duty of the people towards the railway,

With all these funds at their disposal, the Hunanese have not been slow in appropriating them for the construction of the railway. As already decided, that section of the line, from Tsuchow to Hsiangtan, will be opened for public traffic on the 15th day of the 8th month, and that section from Changsha to Tsuchow in about the middle of the coming 11th month. Work connected with the construction of the upper section from Tsuchow to Pinchow and the lower section from Changsha to Yaowchow will be started simultaneously.



Courtesy J. S. Goodell, First Asst. Engineer.

CANTON-HANKOW RY. TRAIN AT WONGSHA

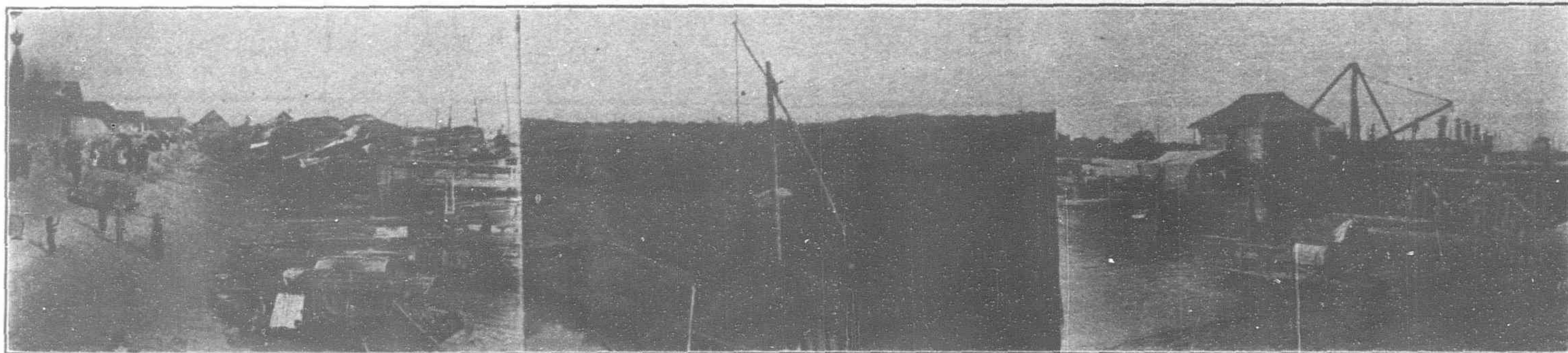
LOOKING NORTH FROM YING CHIN STATION

CONSTRUCTION TRAIN NORTH OF QUAN TIEN

From the day the case was settled, the desire of the Chinese for foreign loans for railway development has been sadly affected, especially among the people of the several provinces directly concerned. Hunan is now recognized as one of the most progressive provinces of China, with many modern schools and colleges for acquiring the new learning, and showing a keen appreciation of things foreign. The Hunanese fully realize the value and importance of railways, the introduction of which in their province they would hail with unbounded delight. As seen in the reports, published in the Chinese papers, that portion of the Canton-Hankow railway which runs through Hunan

and its manifold advantages to them. There are matters in which the Hunanese might not agree, but in this, the building of the railway with Chinese capital, they unanimously agree. The speeches had an electric effect on the minds of those who listened to them with breathless interest, and some of them were so touched that they actually shed tears, and all willingly pledged themselves to purchase shares according to the best of their ability. Resolutions were passed to the effect that, come what may, the railway will be built with Chinese capital. Through the action of the members the Hunanese are now in a position to build the railway with Chinese capital, for sufficient funds have

If, in direct opposition to the express wish of the Hunanese and without any regard for the rights they claim, the Canton-Hankow railway should be built with foreign loans, and not with Chinese capital, the consequences that would inevitably follow would in the opinion of many be very serious indeed. As previously mentioned, they regard this railway as something affecting their life and death—something that they must maintain at any cost. From what can be gathered up to the present, it appears that if their cry, "Chinese capital only" should be unheeded, if their strong protest against the introduction of foreign loans for the construction of the rail-



Courtesy J. S. Goodell, First Asst. Engineer.

RIVER BANK SOUTH FROM OLD WHARF, WONGSHA, CANTON

RICE IRRIGATION AT SAM WAH TIM

OLD WHARF AT WONGSHA

has received the closest attention of the Hunanese because, as they are convinced, it has a vital bearing on them. They regard it as something affecting their life and death, and are determined to leave nothing undone until their object of building it with Chinese capital is attained. They have made strong representations to the Government that it must be built with Chinese capital at any cost. They firmly believe that right is on their side, and are endeavouring in every way possible to carry their point with the Government. They welcome its construction; they have not the least objection to the acceptance of foreign loans by the Government, but what they really object to and will not cease objecting to so long as the question remains unsettled is the building of the railway with foreign capital. It must be understood that in Hunan all classes, from the humblest farmer to the highest official, have invested money in the railway, and the investment was

been raised to meet the necessary expenditure. It is carefully calculated that annually over \$3,000,000 can be raised from actual cash shares, between \$1,500,000 and \$1,600,000 from shares to be paid with house rent collected at such large cities as Changsha and Hsiangtan, over \$100,000 from shares to be paid out of official salaries, and, as far as existing conditions are concerned, not less than \$1,000,000 from shares allotted to merchants. All the subscribed shares have been definitely claimed, so that the money is always on hand ready to be used for the purpose for which it is intended. In connection with the redemption by China of that portion of the railway which was constructed by the American Syndicate, measures were adopted for the imposition of a salt tax and a rice tax, such taxes being capable of yielding large amounts, and from various sources, from which, including the Sanshui-Fatshan branch line, about \$1,000,000 are obtainable every year.

way should ultimately prove of no avail, they would more than likely take further steps to defend their rights and interests. Disturbances may break out all over Hunan, possibly resulting in the loss of innocent lives and the destruction of valuable property. Foreign lives and foreign property there would be endangered, and it would give rise to serious diplomatic negotiations, not to say the calling out of the foreign men of war for the protection of same. But this apparent calamity, which nobody would like to see happen, can easily be avoided if the Chinese should be allowed to build the railway themselves without the use of foreign loans, and in view of what may possibly happen in the alternative, it seems necessary that something should be done to settle the question with the Hunanese on a fair and satisfactory basis. As already stated, the bone of contention with the

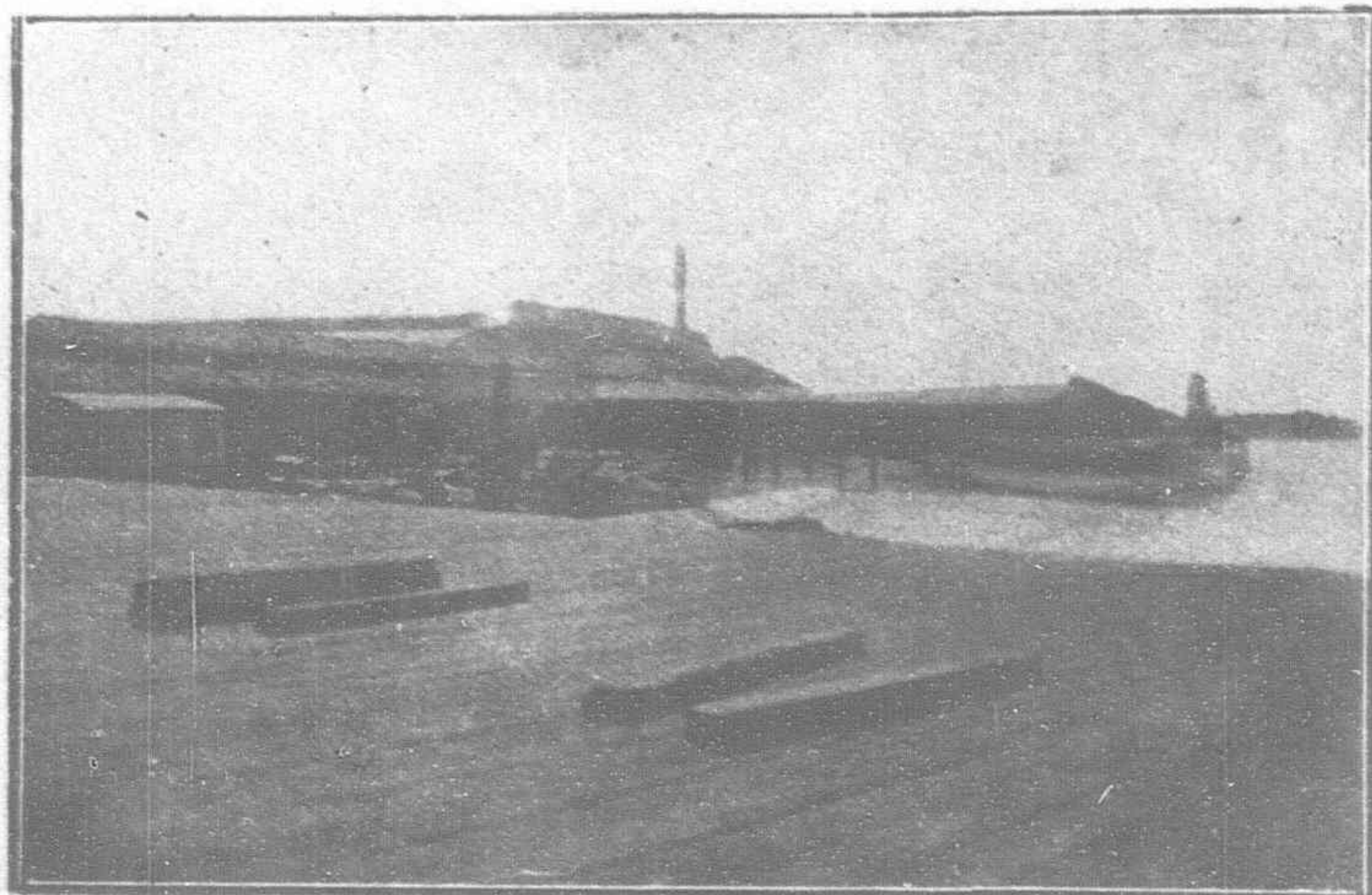
Hunanese is not the acceptance of foreign loans by the Government, but the use of foreign loans for the construction of the railway. Supposing, however, the Government should finally succeed by means of mere pressure exerted on the people in building the railway with foreign loans, even then, it may be assumed, the Hunanese would not stop taking further steps to defend their rights and interests. They would boycott the railway, and would cause such troubles and such

the scheme set forth for the purpose of raising funds from officials' salaries and the increase of salt taxation, etc., we are afraid the writer is a little too sanguine. Experience tells."

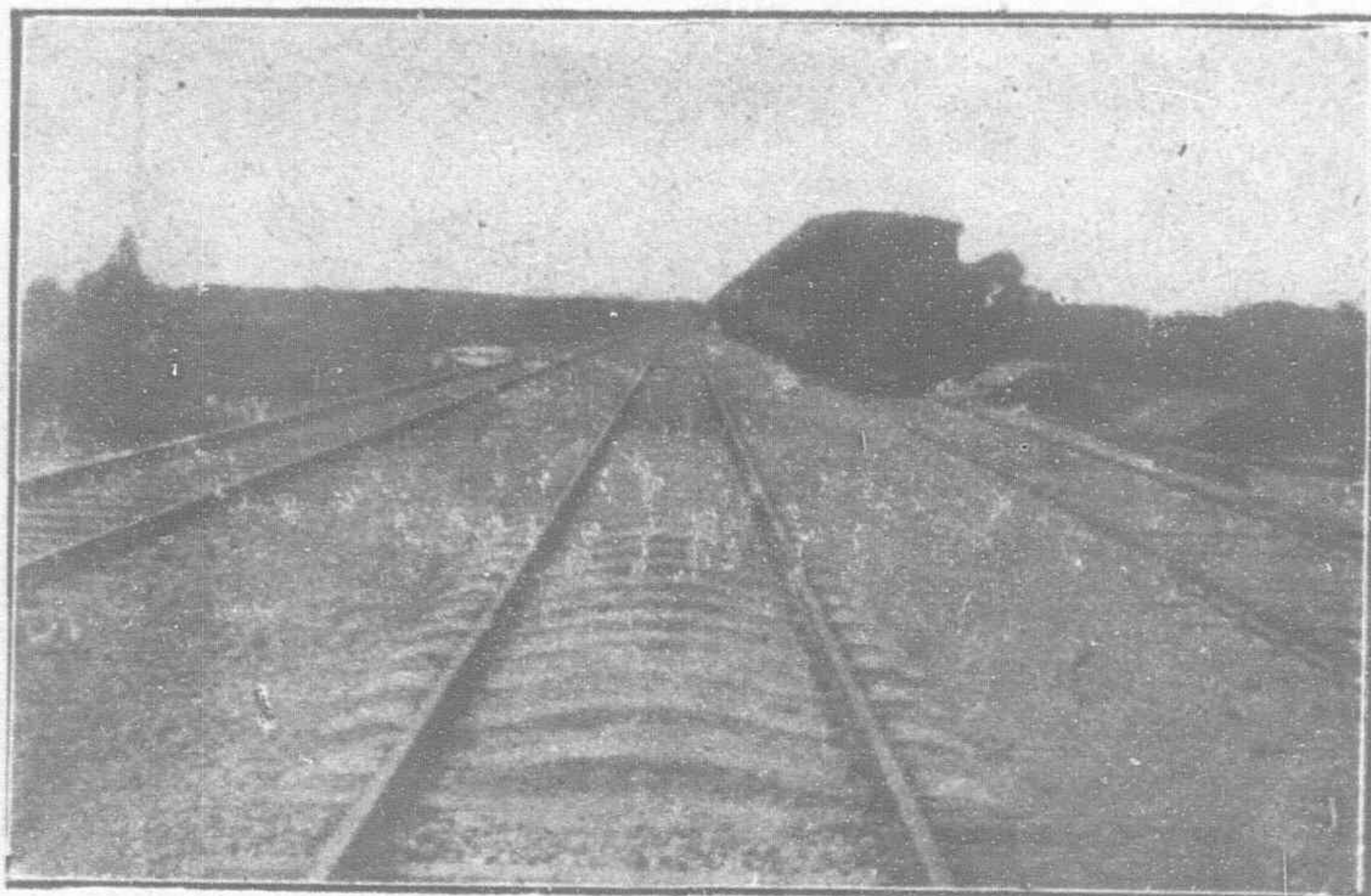
The Canton-Hankow Railway may be said to be divided into three parts. The section in Kwangtung province is controlled by the Kwangtung Yueh-Han Railway Co., Ltd., the Honan section by the Honan Yueh-Han Railway Co. and the Hupeh section by the Hupeh Yueh-Han Company. There is the Samshui

consisted of about twelve miles of embankment and about eight miles of steel. Work had been suspended in the fall of 1904. The latest reports from the Kwangtung section are to the effect that there are 60 miles operating on the main line north of Canton to a point called Kau Wan Shek and the track has been laid for a further distance of ten miles.

Grading is reported finished for a distance of 110 miles to Yingtak where the comple-



CANTON-HANKOW TERMINUS AT SHEK-WAI-TONG



CONCRETE TIES USED WEST OF SHEK WAI-TONG

difficulties as would paralyse all works of the railway.

The above is not written by an alarmist out of his imagination. It is based on facts gathered from reliable sources, showing the firm conviction and attitude of the Hunan people towards the Canton-Hankow railway, and therefore deserves the serious consideration of foreign capitalists who are interested in the development of railways in China.

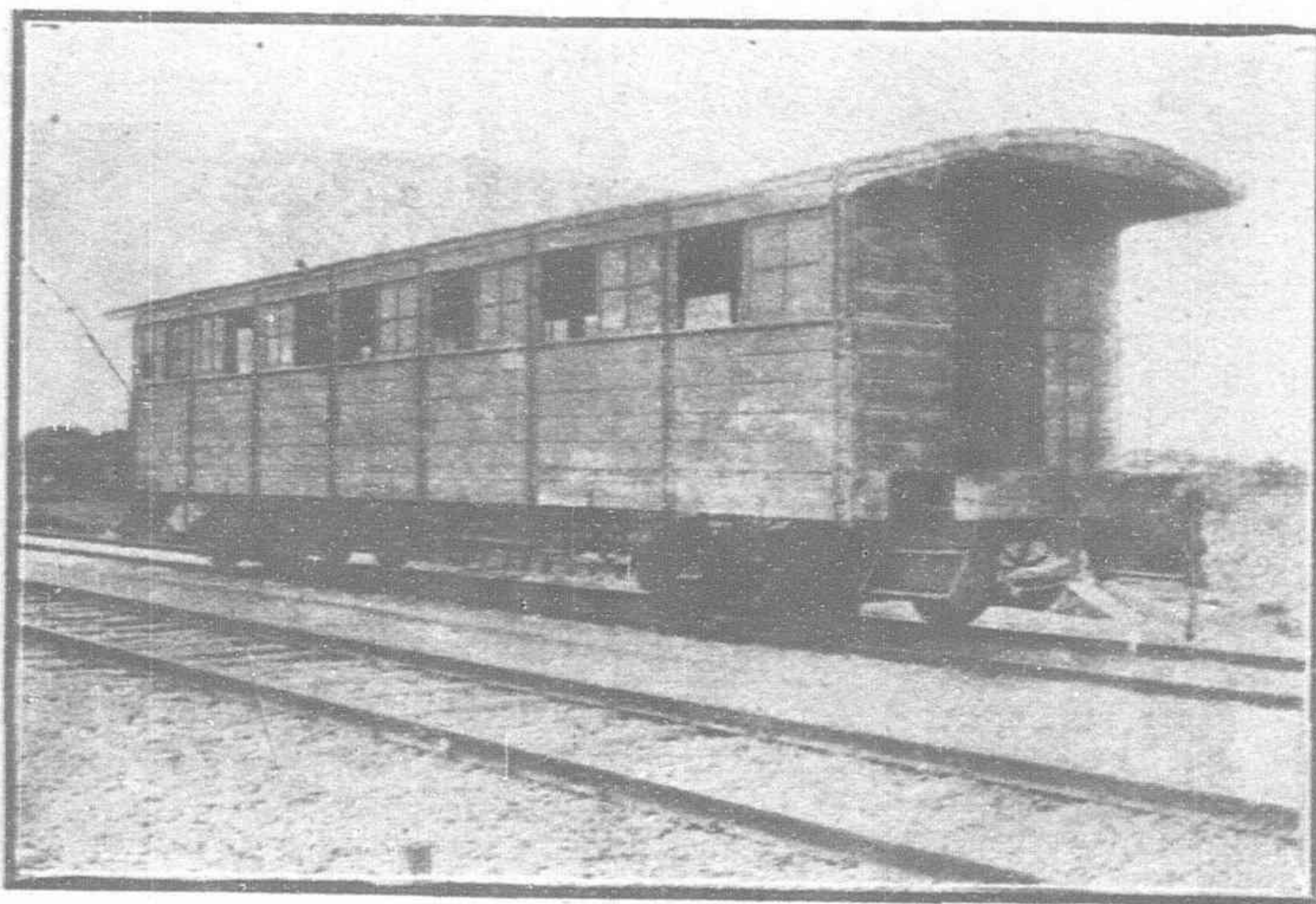
Commenting on the above, the *Peking News* expresses the prevailing sentiment among

branch in which each of the provinces have an equal interest and this line is controlled by what is known as the Canton-Hankow Railway of the Three Provinces.

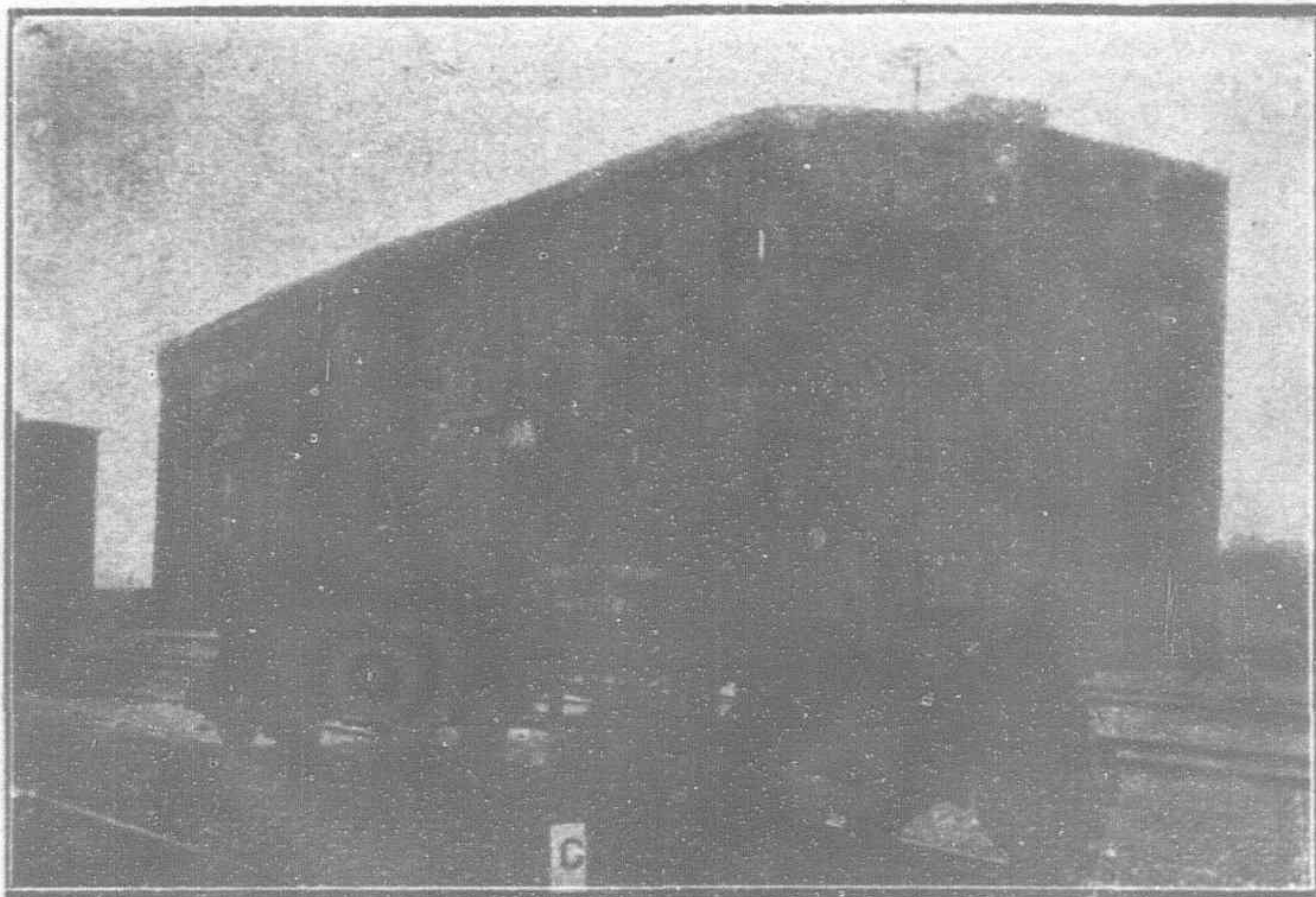
To understand this, it is necessary to revert to 1905 when the American China Development Company turned over their rights to the Chinese. Among the assets was the completed Canton-Samshui branch 30 miles in length, then operating. This line was taken over by the three Provinces under which management it has been successfully

tion of the large bridge at that point is necessary before much is accomplished beyond.

This bridge has two 200-foot spans and four 60-foot spans. About mile 80 there is another bridge being constructed, but the completion of the line to Yingtak offers few serious difficulties. The work is up on the different intervening sections between the unfinished cuts and bridges and awaits the advance of the steel and construction trains to put on the finishing touches. However, unforeseen delays, interruptions and disputes



CANTON-HANKOW OLD SECOND CLASS CAR NOW USED FOR THIRD CLASS TRAFFIC



TYPICAL BOX CAR

foreigners who are consistent in their friendship towards the Chinese and are desirous of giving them square deal when it says:

"We think foreign money should be welcome for the development of China's immense resources and railways especially. We object to foreign money only when it carries political designs which tend to the impairment of China's sovereignty; when it means that China has to pay double for what she needs and to receive half for what she sells. As regards

operated with large revenue return annually. The control of the main line was then divided among the three provinces, the gentry of each province assuming the responsibility for the construction and operation of the line within its boundaries.

The total length of the main line as surveyed is about 750 miles of which 220 miles are in Kwangtung. When the American-China Development Company retired the work accomplished on the main line from Canton

prevail so that the best results may not be anticipated.

Sir Liang Chentung while president of the company succeeded in accomplishing more real results than any of his predecessors. During the last year there have been a number of investigations by direction of Peking and these have been marked by suspension of work rumours of wholesale discharges and other agitation that seemed to affect the railway management throughout and postpone active work.

CYANIDING IN THE PHILIPPINES*

By C. M. EYE, E. M.

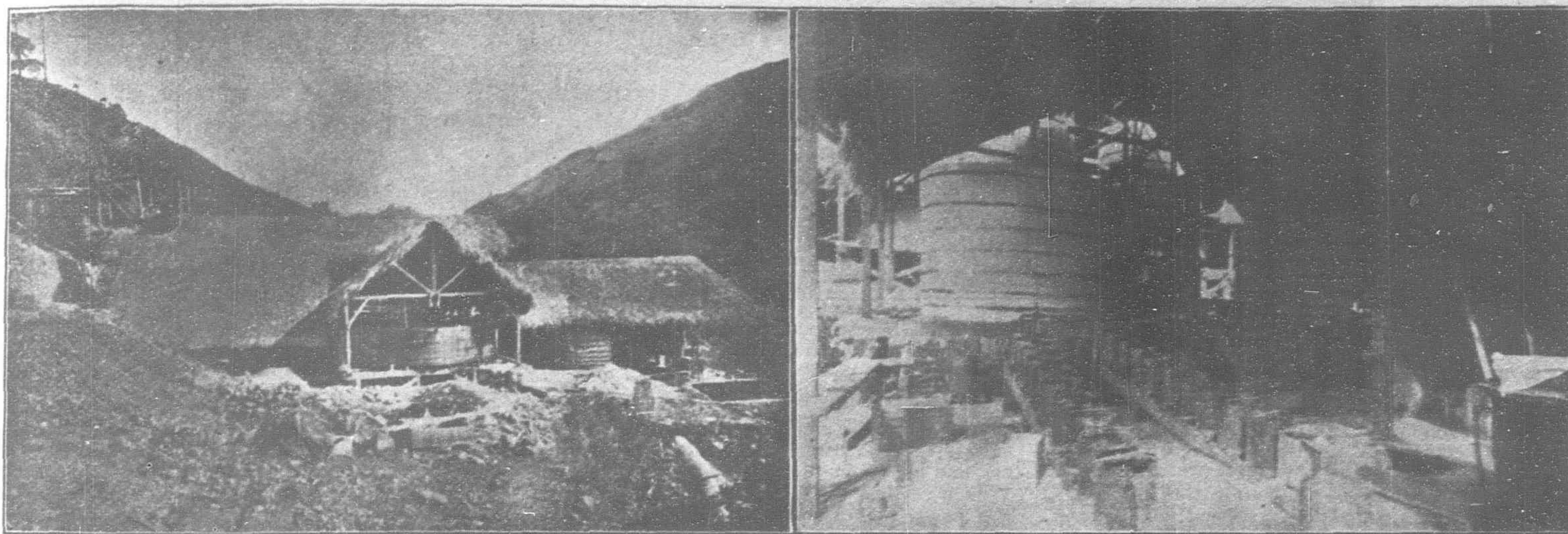
(Formerly Superintendent of the Benguet Consolidated Mining Company, now of the Colorado Mining Company.)

Thus far, the application of the cyanide process to the ores of the Philippines has been at two properties at Antamok, in the Benguet district, but from what is known regarding the character of the ores in other parts of the Islands and of the district mentioned, the use of this method of treatment probably will become much more general. It is with a view of assisting in this wide application that the plants on the proper-

ties mentioned are herein described and the general results and conclusions deduced from their operations given in considerable detail.

The first cyanide plant erected in the Islands at the mines of the Benguet Consolidated Mining Company at Antamok, Benguet district, was put into operation toward the close of 1906 to treat the tailings from the stamp mill, after amalgamation. The original installation con-

sisted of four leaching tanks each 22 feet in diameter by 5 feet in depth, each with a central bottom discharge door 16 inches square; two solution storage tanks each 12 feet in diameter by 8 feet in depth; two gold solution tanks of the same dimensions as the solution storage tanks; two sump tanks each 14 feet in diameter by 6 feet in depth; one 1½-inch centrifugal pump; one set of forty individual bucket ex-



CYANIDE PLANT OF THE BENGUET CONSOLIDATED MINING CO. AT ANTAMOK, BENGUET

Recently Mr. Joseph Lind, superintendent of the Canton-Samshui branch, retired after eight years service on the road. He served on this branch under the American China Development Co. and was retained in the position he occupied up to July of this year. Then followed the retirement of Mr. J. S. Goodell, First Assistant Engineer in charge of maintenance and way at Canton, who sailed for the United States in September at the conclusion of his contract.

In neither of the above instances were there any reasons assigned for the changes beyond the unconfirmed report that no contracts with foreign engineers would be renewed.

The chief engineer of the line is K. Y. Kwong, a graduate of Boston Tech. Mr. J. S. Goodell was his first assistant. Among the foreign engineers now on the line under contract are Charles Gasper, superintendent of motor power and cars; Rich Wood Randolph, Division Engineer in charge of the 3rd Division; James Thorpe in charge of section 9; Harry A. Rader, section 10; John D. Keeler, section 11; Japanese sections 12 and 13; D. G. Hislop, sections 14 and 15. Each of these sections represents approximately 10 miles and on all of them more or less work has been done.

It might be noted that under the proposed loan agreement, English and French engineers are to be employed on the Canton-Hankow and it is not improbable that this may have some bearing on the report of non-renewal of contracts with the present engineers. While the general opinion is growing that this loan will never be consummated owing to the serious opposition of the Hunanese, it is not improbable that the management, in anticipation of its conclusion, may have decided to prepare to meet the above stipulations. How-

ever, the seer who may provide an accurate forecast of the future of this enterprise, has not yet been located.

Little progress has been made in Hunan and Hupeh beyond surveys and organization so far as has been learned. Everything connected with the enterprise in these two provinces is overshadowed by the anti-foreign agitation.

Some light is thrown on operation by the report of Vice Consul Myers of Canton referring to results for 1909 as follows:

"Of the Yuch-Han Railway only 4 miles of track were opened to traffic in 1909, from Yum Tam to Par Kong How. There are many reasons for the little progress made during this time, the principal ones being the failure of grading contractors to carry out their contracts, lack of experienced workmen, lack of good foremen, and alleged lack of concerted action among the directors. The line is now open to traffic for 48 miles, while the grading for another 50 miles is practically completed.

"Last year 1,456,466 passengers were carried. The freight consists chiefly of pigs, poultry, etc., but this amounts to little. The amount collected in fares from passengers and freight was \$120,460. The gross expenses for the year, not including fuel consumption, maintenance of equipment and maintenance of way, were \$20,757. The rolling stock and machinery are valued at \$51,000.

"On the Sam-shui branch of this line 3,293,731 passengers were carried, of which 481 were foreigners. The gross earnings for 1909 were \$263,043, an increase of \$25,585 over the previous year. The total operating expenses amounted to \$84,429, an increase of \$2,782. In 1909, \$56,995 were spent for the improvement of the line and additional property. Compared with the preceding year this item shows a marked decrease, the reason for which was the damage caused by floods during 1908."

tractors or zinc boxes, arranged in four rows of ten in each row; one Hampton zinc lathe; one emery wheel; one small vacuum pump and one small vacuum filtering tank, the whole constituting a regulation leaching plant of the simplest type. The leachers were of 3-inch and the other tanks of 2-inch Oregon pine lumber with flat steel hoops throughout. The filters in the leachers consisted of a grating of pine strips 2 inches high, on which was placed, in two of the leachers, a layer of coco matting, over which was stretched a sewed burlap filter cloth. In the two other leachers, a layer of burlap was first nailed down and then a layer of raw coco fiber was laid, over which was stretched the regulation burlap filter cloth. For a time the raw coco fiber served as well as the coco matting, but it soon packed too hard, and later was removed entirely and the filter worked with but two layers of burlap, the top one consisting of the heaviest "Calcutta" bagging obtainable in this market.

Recently the leaching was improved by raising the filters to about 4 inches from the bottom, and fitting them throughout with coco matting which seems to be the very best filtering medium obtainable.

The individual zinc boxes proved insufficient and troublesome, and therefore they were soon replaced by regular redwood extractors of two double lines of compartments of nine compartments each, the dimensions of each compartment being 24 inches by 30 inches by 30 inches deep, with bottom plugs for removing the product at clean-up. An additional leaching tank of same dimensions as those in use was added in 1908. Two more solution storage tanks each 7 feet in diameter by 7 feet deep were added last year, and since then one of these has been converted into a mixing tank of lime, the solution being pumped through it on the way to the leachers.

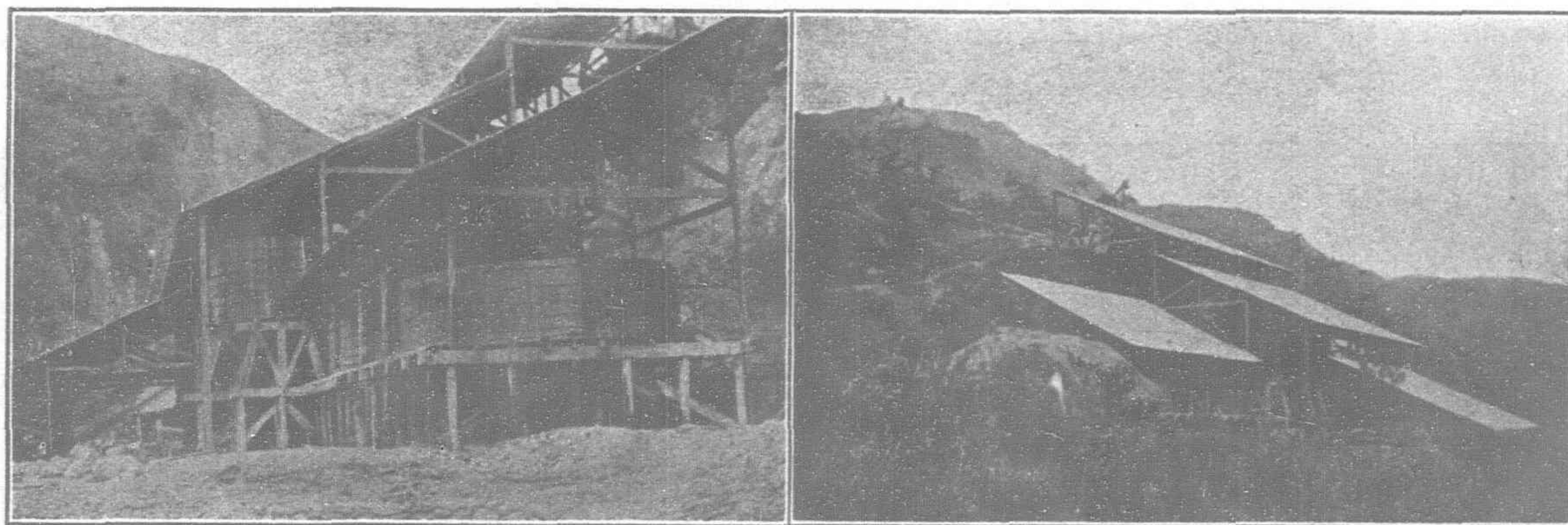
*Bulletin, Bureau, of Science, 1910.

The extreme acidity of the ore has always required the addition of considerable alkali to protect the cyanide from decomposition. At the start, the common method was tried of adding quicklime with the ore as fed to the batteries, but this was soon abandoned, as it took a prohibitive amount of lime to accomplish the neutralization of all the acid, and also because a heavy deposit of calcium sulphate (artificial gypsum) formed on the screens, mortar lips, etc., and even incrusted the amalgam coating on the table. Then the method of spreading a layer of lime on the top of the leacher charge was tried, but an insufficient

securing good precipitations in the zinc boxes when they were properly dressed and filled, and the hydrates kept out, even though there was at all times an appreciable precipitation of copper on the zinc.

Soon after the beginning of operations it developed that the slimes, which were separated from the sands by an upward current classifier and run to waste, were of sufficient value to pay to treat, so a slimes plant, consisting of two tanks, each 14 feet in diameter by 16 feet in depth, was added. Each of these was provided with an overflow launder around the top, and with a stirring mechanism within, driven by

ment solution for the agitation.) One complete settling, decantation and settling consumed eighteen hours. Successive charges of weak solution were pumped on, agitated for fifteen minutes each time and removed by decantation, as many such charges being used as the time permitted before the tank was needed for the next charge. Usually 6 or 7 such decantations were made. This method of removal of the values was slow and incomplete, however, owing to the fact that at the maximum degree of settling the ratio of pulp to solution was still 40 to 60, or 1 part of solid matter to 1½ of liquid. In order to gain additional capacity as well as



CYANIDE PLANT AND MILL OF THE BUA GOLD MINING CO., BENGUET

amount of lime was dissolved and carried downward to keep the charge neutral, even when it was given a preliminary water wash with the lime on top. Lime at that time was costing 20 cents gold per pound delivered, and, as caustic soda could be delivered for 5.5 cents gold per pound, the use of lime was for the time abandoned, and soda employed instead.

The practice then developed of draining off the water from a charge when filled, leveling off the top, putting about 50 pounds of caustic soda in a bucket in the center of the top and running water through it until the charge was covered, then opening the drain below and allowing this soda wash to drain off to waste. Then the drain was closed, a solution of full working strength (35 per cent KCN and 2 per cent soda) put on from the bottom until the charge was well covered, the charge then allowed to stand for a few hours, then percolation started downward, and continued under full head for from six to seven days, then the solution drawn down fairly close to bottom and weak solution put on, this following in successive heads for several days, then several successive heads of wash water were put on, and finally the charge sluiced out to waste.

The whole of the treatment took about eighteen days, which is an unusually long time, but it seemed to be necessary, as only a long contact with a strong solution would give a fair commercial extraction. This prolonged treatment was largely responsible for the rather high consumption of cyanide, which averaged a little over 2 pounds per ton treated. The use of soda was not entirely satisfactory, for the reason that unless very great care was taken to add it so that the degree of alkalinity of the solution coming off was nearly constant, there would be a formation of hydrates of iron and alumina, etc., which would clog the filter, get into the zinc boxes and make trouble generally. These were only soluble in a considerable excess of caustic soda in the solution. On the other hand, if the strength of soda was very much higher than the figure given, it led to an excessive consumption of zinc shavings. With the lowering of the price of lime to 1.25 cents gold per pound and the introduction of a mixing tank as noted elsewhere, the use of lime was resumed and of caustic soda abandoned, except to help out the lime in case a solution was acid or neutral. No more trouble was experienced with hydrates after lime was substituted for soda. No trouble of moment was ever encountered in

bevel gear from a shaft above, common to both agitators. The stirring gears were designed by me and made in Manila, and consisted of a 3½-inch vertical shaft, to the upper end of which was keyed half a standard coupling, reversed, and to the lower end, the other half of a coupling in its normal position. The shaft was carried above by a train of balls in a groove in a cast plate, the under side of the coupling bearing on the balls. If it were desired to raise the whole mechanism, the supporting plate was raised by a chain block attached above to a basket frame fastened to the bearing plate. The rig could thus be raised or lowered while the agitator was running. The shaft was kept in line by two vertical guide bearings and when being raised or lowered slipped through the bevel gear by virtue of the latter being connected to it only by a feather in a long keyway. The agitator rig at the bottom consisted of four radial arms of 3-inch pipe bolted and clamped to a plate of three-fourths inch steel, 2 feet square, which was bolted up under the half coupling. On each radial arm 10 socket castings were clamped at equal spaces of 9 inches, and in each socket was fitted a stick 6 feet long and 1½ inches square, set vertically. The speed of the agitator was 16 revolutions per minute and the agitator was all that could be desired. These tanks had square discharge doors at the side at the bottom, and were provided with an entering launder that terminated in a square box reaching several feet below the surface near the center.

In practice, the stream of slimes from the classifier was run into the tank, being charged through this box, the solid matter settling to the bottom and the clear water overflowing the side to waste. As soon as the charge of settled slimes had reached a depth of about 7½ feet, the stream was switched to the other tank, and the supernatant water removed from the settled charge. Then about 500 pounds of slaked lime was added, agitation started, cyanide solution pumped in, the necessary amount of cyanide added to bring it up to working strength (testing 1 per cent KCN) and agitation continued for nine hours. This accomplished very thoroughly the dissolving of the gold values. After the agitator had been stopped and raised, the slimes were allowed to settle to their level in the tank, the clear gold bearing solution being removed by decantation through a hinged pipe in the side, and conducted to the weak gold tank in advance of the extractors. (The weak-solution circuit for the leaching was used for the treat-

more complete washing, an automatic filter plant consisting of Ridgway one-unit filter, a double cylinder Imperial compressor, a horizontal wet displacement pump, and a steel-lined slimes pump was installed during the past summer. This plant was driven by a separate water wheel, and made a very complete installation in itself but, unfortunately, it was lost in the flood that destroyed the greater part of the cyanide equipment in November of the present year, and before very many data as to its efficiency were obtained. However, it would undoubtedly have effected a very material saving, as well as have increased the capacity of the slimes plant several times over.

At the beginning of operations, the crushing was rather coarse, a diagonal slot screen with width of opening corresponding to 10 mesh per linear inch being used. However, leaching results showed that this was too coarse for good work, and the mesh was gradually increased, first by using 16, then 20, then 24, and finally 30 mesh sizes, with increasingly good results. Investigation of the sands before and after leaching also showed that a small amount of high-grade iron sulphide carried a fair percentage of the values, and that this sulphide still contained good values after leaching, so a Wilfley table was installed over which the sands passed from the classifier, and from one-thirtieth to one-fiftieth of the tonnage was removed as a high-grade concentrate which was stored for future treatment or shipping. A series of experiments on this material showed that by fine grinding in cyanide solution in a tube mill, well over 90 per cent of the value was dissolved. In fact, all of the work done at this plant showed that when the ore is reduced to slime, the solution of the gold content can be accomplished easily, which points to this method of treatment as best for the whole tailings from the stamp mill, provided that every part of the latter will stand the cost of the reduction to slimes, which would not be large, in view of the splendid and cheap water power available. It is to be hoped that when the plant is renewed, it will be along these lines.

The plant of the Bua Mining Company, similar in many respects to the original leaching plant of the Benguet Consolidated Company, was installed and put into operation in 1907 to treat

(Continued on page 170.)

THE FAR EASTERN REVIEW

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HONGKONG AND HER RAILWAY

Hongkong inaugurated a new era in her history on October 1st, when Sir Henry May declared the British section of the line to Canton open to traffic. This era might be known as one of fulfilment of the hopes of the promoters of the enterprise and the completion of this first link connecting the British colony to the Chinese empire has been marked by a general expression throughout the colony of loyalty to the enterprise and of a desire to assist in making the venture a success.

The comment in the local press involves general acceptance of the statement made by Mr. E. S. Lindsay, M.I.C.E., Chief Resident Engineer, quoted elsewhere, and where formerly there was a disposition to criticize, we find general appreciation, due largely to a more comprehensive knowledge of the serious character of the undertaking and the almost impossible engineering difficulties overcome.

The *China Mail* does not expect immediate results but leaves the outcome of this railway connection hopefully to the future. That paper says:

"With the opening on Oct. 1st of the British section of the Kowloon-Canton Railway, Hongkong enters upon a new chapter of its existence. What will be written in that chapter Father Time will alone disclose. The high hopes which were entertained when this particular railway project first took shape and form in men's minds are not destined, we fear, to be realized, at least for a long time to come. For it must be evident to the merest tyro that the little bit of railway track running through the hinterland of British Kowloon can be but a small factor in securing that development of trade and commerce which the Colony so ardently longs to see. But it is a means to an end, and as such justifies its existence. Someday when the great trunk line of central China has been constructed and put into regular working order, Kowloon will be the southern end of a line of steel rails which, running through some of the richest districts of China, will, via Hankow and Peking, connect with the Manchurian railway system and thereby with the Siberian line running to Moscow. And as the Far Eastern terminus of such a system Kowloon should, in the years to come, swell into a place of much importance. But many a long day will have to drag its weary length to eventide ere we see this magnificent dream realized. For the moment we can but hope that the through connection with Canton will be realized by next July and so enable a commencement to be made in the exploitation of the densely populated delta which has the City of Rams as its provincial centre.

"The immediate prospects ahead of our little bit of line are not particularly bright. Its cost, so very much above the first entertained idea, will make the earning of interest on the outlay alone a very heavy task, and for many years we fear that the line will be a white elephant, the expense of whose up-keep will fall heavily on the Colonial Treasury. The political importance of the line outweighs every other consideration. We had to build it in the future interests of Hongkong—and we hope posterity will be duly thankful to us for the sacrifices we have made."

The *Hongkong Daily Press* believes, with Sir Henry May, that the immediate effect of British section will be the more rapid development of the New Territory which has suffered through lack of communication, but looks forward to the greater benefits of international connections in the future. We quote:

"Saturday October 1st, 1910, will be a memorable day in the history of the colony of Hongkong. After many years of waiting the community had the satisfaction of witnessing the opening of a railway line through the British territory of Kowloon, and can now look forward with eager anticipation to the completion of the Chinese section—more than four times the length of the British section—which will give us direct connection with the city of Canton, the great metropolis of South China. If all goes well, the entire length of 112 miles will be open to through traffic long before this time next year. We shall then be watching more closely than now the progress being made with the construction of the great arterial line which is to connect Canton with Hankow, and contemplating the

prospect of some day being able to travel from Hongkong, via Hankow and Peking thence across Siberia to Calais. That, it is true, is looking a long way ahead. Meanwhile it remains for the community at whose cost the short British section of the line has been made to do all in its power to promote in every way its usefulness and its prosperity. The undertaking has been a costly one for a small Colony, but we are glad to have it on the authority of an expert of the wide experience of the present General Manager of the line that, having regard to the nature of the work, its cost compares favourably with similar undertakings elsewhere. What, however, is necessary at the present time is to emphasise the original intention of the railway, for as Mr. Lindsey very appositely remarked in the course of his speech "the original intention is liable to be lost sight of when, after a railway is finished, traffic sufficient to pay for its working and the interest on its cost is not immediately forthcoming." Probably it will be some years before the revenue covers even running expenses, to say nothing of interest. Consequently in the history of the undertaking which appears on another page we have deemed it important to give special prominence to the main considerations which weighed with those who so strongly advocated the construction of this line a few years ago. No doubt its most immediate effect will be to encourage development in the New Territory, a subject on which Sir Henry May enlarged in his address on Saturday. But there are even more substantial reasons for the railway. So long as Hongkong remained without railway connection with Canton, while great railway undertakings were projected to connect Canton with the interior of China, the Colony was threatened with the creation of a rival port in the vicinity of the Bogue which would serve as a seaport terminus of the great trunk railway. As the China Association pointed out to the Government, "the bare possibility of such a contingency is sufficient to arouse the liveliest anxiety in the minds of all persons interested in the welfare and prosperity of the Colony, not alone on account of the individual losses which would ensue from the enormous depreciation of property and investments, but also because of the severe blow it would inflict on British influence and prestige throughout the whole of China." These are weighty considerations, and now that the British section of the line has been constructed and we see an early prospect of through traffic being opened with Canton, we can renew our thanks and congratulations.

"Trade has in other lands invariably sprung up around the railways and we do not see why the same phenomenon should not occur in southern China. True the Canton river is a formidable competitor and always will be, but with the laying down of feeder branch lines to important centres of population and industry, the railway should tap new sources of potential wealth which the riverine trade cannot possibly touch or affect. Besides, if the experience of Japan is duplicated in her consanguineous neighbour, the Chinese will not be long in acquiring the railway habit. When a man can cover a distance in a few hours with ease and comfort which used to take him days of toil and worry to accomplish, it is not long before he finds it necessary to repeat the journey. When railways were first built in Japan people said that it would be hopeless to expect much passenger traffic as the habits of the Japanese, apart from certain pilgrimages made at different ages and times, made him a home-keeping human. How completely these old prophecies have been exploded any one who has travelled in Japan can tell you. We venture to think it will be the same in China."

Manila does not propose, apparently, to remain idly by and permit Hongkong to capture all South China trade, perhaps for the reason that Americans have not forgotten the loss of prestige and trade resulting from the American-China Development Co. fizzle and would redeem their position. The *Daily Bulletin* is not so sanguine of results but believes Manila's future opportunities should be looked into. That paper says:

"It might be said that had the American-China Development Company carried out their contract with China on the Canton-Hankow

the Kowloon-Canton would very probably not have been built. The fizzle of the A. C. D. made it possible for Hongkong to secure terminal connections and where a modern harbor for Canton was proposed by the Americans to handle the Canton-Hankow freight, the British port of Hongkong will now take care of it and have the advantage of being a distributing center with rail connections throughout the richest sections of the empire.

"Her only probable competitor for this South China trade would be Manila, if the latter wakes up. It will require years of preparation on the part of the Philippine metropolis to secure any portion of this trade but there is plenty of time. It would mean a South China harbor and a well equipped steamship line engaged in reciprocal trade with the Chinese.

"Freight rates from Manila must meet the rates over the 110 miles of railway between Hongkong and Canton and we must be in a position to secure return cargoes. However, this matter is worth looking into. Manila must not sit idly by and be satisfied with the crumbs from South China. We would suggest that the Merchants' Association and the Cantonese merchants of Manila get together and see what can be done. Competition between Hongkong and Manila for this trade would prove interesting and instructive and at the same time test out the capacity of the two nations of shopkeepers at their respective jumping off places."

DEVELOPMENT WORK OF THE PHILIPPINE RAILWAY COMPANY IN THE VISAYAN ISLANDS

The driving of the last spike of the Panay Line of the Philippine Railway Company brings us to the consideration of what the completion of these lines of railroad means to the country, in general, through which they pass.

The connecting up of the rails on the Island of Panay marks the beginning of the end of the largest piece of construction work financed by American Capital in the Far East. Despite the greatest difficulties on account of labor shortage, weather conditions in the Islands, and the strained financial conditions in the United States, this work has been pushed steadily for the past three years. It will take possibly another year to replace the temporary wooden structures with concrete and steel bridges, complete the station buildings, widen the embankments to full width, put the required amount of ballast under the track, and in general put the last thirty miles in a state of final completion.

The lines on Cebu and Panay run through some of the richest country in the Philippines, but owing to cattle diseases, the insurrection, the lack of modern methods of cultivation, and the almost total absence of any means of transportation, mile after mile of the richest land has lain idle for years.

With characteristic American energy, the management of the lines have set themselves to the task of developing the resources of the country tributary to the railway.

Realizing that the methods in common use among the Western railroads of the United States will not suffice in this country, they are endeavoring to accomplish the same results by other means.

The territory through which the road runs on the Island of Cebu is the most thickly populated section of the Archipelago. In spite of this, there is much land that is not under cultivation and the land that has been planted, in many cases, is not producing more than fifty per cent of its possible output. Corn, hemp and maguey, sugar and tobacco are the principal products.

The Railway Company has imported from the United States several different varieties of seed corn which will be distributed, at actual cost, to the farmers. Railway representatives will closely supervise the planting and cultivation of the corn. When it is mature, the seeds which produce the most corn per hectare will be decided upon and arrangements made to furnish this seed to all planters.

There are many large tracts of land, which are capable of growing maguey, not now under cultivation and much of the maguey now raised is improperly planted and the leaves

cut before they are fully matured. The mailing of circulars and talking with the people has little, if any, effect. In order to give them a practical demonstration and object lesson as to the proper method of cultivating maguey, the Railway Company borrowed from the Bureau of Agriculture a Prieto maguey stripping machine and set it up on two flat cars. This machine was taken to various stations and set out on a side track. All the farmers were invited to bring in their maguey and have it stripped free of charge. When a farmer brought in his maguey, there was a representative of the Railway on hand to show him what, if anything, was wrong with his maguey. They stripped some of the maguey that had been properly planted and was fully matured, showing him the difference in the fibre, and then instructed him fully as to how he should handle his fibre in the future. In order to make this object lesson doubly strong, the Railway Company arranged through the Cebu exporting firms to let them act as buyers for their account. When a farmer brought in his maguey and had it stripped, the representative of the Railway immediately offered him the market price for the grade of maguey which he had and told him that if he had produced maguey equal to samples shown him, he would have been paid considerably more for it. This was an argument that the farmer could not refute, and within a short time the quality of fibre produced was so improved that the price for first class maguey was increased from ₱6.50 to ₱9.00 per picul and to-day Cebu maguey ranks higher than any other maguey raised in the Islands.

Acting as distributing agents for the Bureau of Agriculture, the Railway Company have furnished the planters of Cebu 4,000,000 maguey plants, free of charge, which have been set out under the supervision of the Railway Company. A record is kept of the parties to whom the plants are furnished and where they are planted and they are inspected at frequent intervals by the representatives of the Railway Company and the Bureau of Agriculture. In about four years Cebu will rank first in the cultivation of maguey and derive an immense revenue from this source.

At the present time the produce of the country in both Cebu and Panay is bought up by Chino and Filipino traders and, after passing through the hands of two or three middlemen, finally reaches the exporter. The producers have not the slightest idea as to the prevailing prices at the market points and are at the mercy of the local buyers. To obviate this difficulty the Company gets out every two weeks sheets showing the prices paid for all commodities produced in the territory tributary to the line, at the various market points along the line. These price lists are posted at each station. In this way the farmer can ascertain at a glance the prices paid for his product at all points along the line and ship it wherever he can get the most for it. This is likewise a guide for buyers.

In order to encourage the people to sell direct to the exporters or consumers, arrangements have been made with steamship lines running out of Iloilo and Cebu to Manila, whereby through bills of lading are issued at stations along the railway direct to Manila. Freight so billed is switched down onto the water front and loaded onto the steamer direct, thus eliminating any charge for transfer. If there is any transfer charge such as lightering across the river at Iloilo, it is absorbed by the railway and steamship company, so that the rate to the shipper is simply the railway plus the steamship rate from his station to Manila, and vice versa.

In order to encourage the large firms to send buyers out to deal directly with the people, the Company allow them to build bodegas, according to design approved by the Company, on their right of way convenient to the loading tracks, at a nominal rental for the land, and in some cases have even gone so far as to permit bona fide buyers to use their freight houses to store freight until time to send it to the steamer for Manila.

Each station is provided with a sample rack on which are exhibited choice samples of the products of the surrounding country, together with instructions in Visayan for proper planting and cultivation in order to raise similar grades.

The natives have already begun to appreciate the work of the Railway Company in this direction and are holding their products for better prices and the local buyers are forced to pay the farmer what product is worth.

There are many cases of farmers three or four miles from the railway being absolutely cut off on account of lack of passable roads. The Company is making strenuous efforts to get the municipal, provincial and insular governments to put the existing roads in condition or construct new roads from such districts to the Railway stations.

They have representatives scouring the country talking with hacenderos and planters, finding out what they need, the conditions under which they are working, rendering them assistance where possible, and encouraging them in every way to put all the land under their control under cultivation. Land that is for sale is noted and prospective purchasers encouraged to apply to the Industrial Department of the Railway for assistance in buying land. Every effort is being made to get outside capital interested in the Visayas.

New industries are being encouraged in every possible way, the railway seeking out new industries which are suitable for the country, finding a market for their output, and advising them as to the purchase of raw material.

A canvas is being made on Panay to see how many farmers in each district would contract for the use of cable plows on their land. If a sufficient number will go into it, the Company will endeavor to get such plows put in each district. The agents of the Company act as selling agents for agricultural implements and up to date plows are put on exhibition at each station, together with any other agricultural implements that firms may desire to exhibit while working the adjoining territory.

Through the efforts of the Railway Company, one of the missionary societies in the Island of Panay has taken steps to secure 200 hectares of land on mile 42 of the Railway and will start immediately an industrial school. They have about 100 boys in their charge and will make a model farm and at the same time teach the younger generation modern methods of cultivation.

An effort is being made to get the Bureau of Education to start a similar school on some land which they own near Passi. Such a school would, if properly managed, be practically self-supporting. As nine tenths of the wealth of the Islands must always come from the products of the soil, it would seem that a large percentage of the funds and attention of the Bureau of Education should be devoted to educating the people along agricultural lines. Such schools would be practically self supporting and would not only teach the boys in the school the proper methods, but would turn them for life toward agricultural pursuits, and at the same time serve as an object lesson to all the older farmers who could visit the schools. It speaks highly for the Baptist Missionary Society in the Visayas that they have been the first to take up this work.

It will be a long, hard undertaking, and probably cannot be accomplished without the active assistance of the Bureau of Agriculture, but the Railway Company hopes to make the Filipinos see the advantage of putting every available hectare of land under cultivation, using modern methods of farming and preparing their crops for the market. If they are successful, within ten years the Visayan Islands of Panay and Cebu will be two of the richest Islands in the Archipelago.

CHINA'S SENATE

Constitutional government for China was advanced this month by the convening of the National Senate of two hundred members, half of whom were appointed by the Prince Regent and the balance selected from among two hundred candidates named by the provincial assemblies.

On October 3, the following decree was published:

"We have recently decreed that the 20th day of the 8th moon this year has been selected as the day of the first meeting of the Senate and the members should prepare all things necessary previous to the opening of the Senate

according to the regulation enforced. With reference to the memorial presented to us regarding the completion of the establishment of the Senate, we are exceedingly pleased to note this mode of procedure. In accordance with the instructions given by the late Grand Empress-Dowager the late Emperor had, in consideration of the difficult circumstances of the Empire, issued many Rescripts advising that preparation should be made for a constitutional government which event has never been adopted before and this mode should be continually followed for a hundred generations. In obedience to the late Emperor's instructions, we have repeatedly issued Decrees to the metropolitan high officials to prepare for the constitutional reform in regular order. As the Senate is the foundation of the upper and lower houses of parliament for which constitutional government will be relied on the performance of the administration of that department, and moreover the regulations for many years performances have been drawn up and the people, both Chinese and Foreigners, are now eagerly expecting to see this reform carried out. We therefore ordered the Grand Councillors and the Members of the Government Council to prepare all questions regarding various state affairs to be put forward before the first meeting of the Senate for decision in accordance with the rules and conditions enforced. Decree is hereby issued ordering the Members of the Senate to act in equity in the performance of their duties, thus showing to the people our sincere desire to fulfill the anticipations of our people."

Upon the opening of the conference the following special decree was issued:

"Ever since I was instructed by Imperial Order to be the Regent of the Empire the Country has been in a state of embarrassment and I have striven my utmost, both day and night in co-operation with the Princes and the High Ministers, to prepare everything for constitutional government in regular order. As the establishment of the Senate has been completed and the ceremony for the formal opening has taken place, I was glad in attending this special happy event and it was also held as the first conference. The principal important consequence of the administration of constitutional government in a civilized country is to depend on the people and the Government officials who should harmoniously unite together in the discharge of their duties. As the establishment of the Senate is the first great event of China and the members were selected by the people, it is hoped that all the Members will exert their best endeavors to show their merit in their performances."

The senators selected by the Prince Regent were chosen from among the members of the Imperial family, high officials, literati and gentry who are staunch supporters of the dynasty and represent the most conservative interests of the Empire. Prince Pu Lun presided at the initial sessions which were marked by decorum and dignity. The following questions were submitted for consideration and from indications the first Senate will find its time well employed:

- 1.—The Regulations for Insurance and Transportation of Cargoes.
- 2.—The Press Law.
- 3.—The reorganization of Education in the Empire.
- 4.—To promote commerce in Mongolia.
- 5.—The privilege of copyright.

The following are the six questions submitted to the Senate's consideration by the various provincial assemblies.

- 1.—Kwangse Province—The prohibition of the opening of opium shops.
- 2.—Kiangsi Province—The operation of the Stamp Tax.
- 3.—Kiangsu—To relieve the embarrassed situation of the sub-prefectures and districts.
- 4.—Kiangsu—The reorganization of levying of taxes and making deeds for property.
- 5.—Hunan—The suppression of opium.
- 6.—Hupei—The administration of navigation.

So far as has been learned, the organization was effected with little friction. The members have had the benefit of the experience of the provincial assemblies and this may be responsible for the harmony reported.

It might also be said that the body is representative of the different elements of Chinese life and while the lines are sharply drawn between the Imperial appointees and the elected provincial members, the large questions before them for consideration have absorbed their attention, and until these are disposed of and effective legislation recommended the capacity of the Senate to lead the way to constitutional government shall remain indefinite.

However, the Senators' conduct has already attracted favorable comment from the foreign press. The *Shanghai Times* leads in a very optimistic vein. After referring to the success of the Provincial Assemblies, the organization of which was the first step towards self-government, that paper says:

"It was not to be expected that such an acute question as the dispute between the Governor and Provincial Assembly of Kwangsi should come up for discussion at one of the first meetings of the new body, but the way in which it was handled is another indication of the genius for self-government which is being shown by the Chinese people. As in every such gathering in other countries, there were members who seemed inclined to break away from the established rules governing their organization, but these were restrained by the majority, which insisted on proceeding according to the constitution of the Senate. A suitable Memorial was sent to the Throne through the proper official body, conveying the opinion of the Senate as to the dispute, and there is every likelihood that an early settlement will be effected. The incident was a severe strain upon a newly organized body in which there had been no time for leaders to be developed, and the way in which it was disposed of is the best possible assurance to the country that the Senate will be a most useful addition to the governmental organization of China on modern lines. It also shows that the plan for a gradual extension of power to the representatives of the people during a term of nine years was carefully devised, and that there should be no deviation from it in the interests of a certain section of the more restless gentry. The experiences of the Provincial Assemblies of last year have been a valuable guide to the Senate at its first meeting, and as it will prove through each successive development of the programme—that what has gone before will be a valuable lesson to the part which follows."

The *North China Daily News* describes the duties of the Senate and refers to it, with its restricted powers, as a buffer between the throne and the representative provincial bodies. That paper says:

"Among the duties of the Senate will be the discussion of all the financial matters of the Empire, new laws (except the Constitution and such as appertain to the Imperial household) and changes in old laws, together with other matters that may be specially submitted to it. In the event of a Grand Councillor or any Minister disagreeing with a resolution of the Senate, the latter will be required to reconsider its opinion, and if the matter is not susceptible of adjustment, it has to be referred to the Throne for a final decision. Direct petitions from the people will be submitted to this provisional Parliament, as well as all disputes between provincial assemblies or between an assembly and the government of its province; while the Parliament has the right of putting questions to a provincial assembly regarding provincial affairs. Finally the Senate, with the concurrence of more than two-thirds of its members, may refer to the Emperor any arbitrary act of a high official committed in violation of law or in disregard of the rights of the Chamber."

"In China, as she is at present constituted, it is not likely that the facts of government will be found outside the theory of government. There is no intention on the part of the Throne to allow, except under extreme pressure, the constitutional movement to transfer the Emperor's prerogatives to a Cabinet dependent on the majority in a popular Assembly, representative of the whole Empire. The movement, indeed, has been utilized to advance the much needed centralization of political power in Peking. So far the provincial governments have acquiesced under the glamour of constitutional progress in the surrender of their diplomatic authority

and have tolerated, without encouraging, tentative interference with their financial powers. Whether they will consent without a struggle to a complete surrender of the latter may be thought problematical; but in the Senate the Throne would seem to have found a convenient arena for arriving at a solution of the difficulty in a way that will shield it from direct attack when the provinces are pressed into their last line of defence."

"In the Chinese system of constitutional government, it is to be feared, there is little indication at present that the Throne wishes to allow out of its own hands either the legislature, the judiciary or the executive. On the other hand the provincial assemblies have shown a tendency to take themselves seriously and to compel attention on the part of the local governments. If the Senate can invest itself with the same degree of independence, the world will be able to watch with no little interest the struggle of these deliberative bodies to impose true parliamentary ideals upon a people traditionally conservative and habituated to obedience. No political forces in Japan have been evolved within fifty years with sufficient strength to remodel the government; and in China the only additional agent that might be pressed into the service of out-and-out constitutionalists would be the possibility of a dynastic change, which is happily lacking in Japan. But if China is strange to the idea of constitutionalism, she is equally ignorant of the principle that subordinates the interests of the individual to the welfare of the nation, and on no other basis can she hope to build a successful constitutional government."

The *China Daily Press* interprets the convening of the Senate as evidence of the sincerity of purpose of the Prince Regent to carry out the program towards ultimate constitutional government and referring to the conservatism that marks the progress in this direction says:

"There are many ambitious, dissatisfied people in the Empire who are clamouring for the earlier establishment of Parliament, but until those who are likely to be entrusted with the new duties have passed through the period of probation, and the electorate have been educated to the proper appreciation of the franchise, there seems little reason to hasten the experiment which is fraught with so much importance. The Government has given proof that it will implement the promise made some four years ago. There is no occasion yet to question its honesty of purpose, and the speech of the Prince Regent on Monday in opening the National Assembly conveys the impression that the Throne views with sympathy the steps taken towards the development of constitutional government. Certainly, it will be the wish of all interested in China's progress that the hopes entertained regarding the new body will be fulfilled, and that it will give satisfaction to the Government which has called it into existence."

In the progress towards her ideal of constitutional government, China may feel assured of constructive encouragement by all broad-minded foreigners. No step taken has been a disappointment and confidence in the capacity of the Chinese to ultimately master the principles of self government is not wanting.

THE RECALL OF YUAN SHIH-KAI

China's need of her strongest men is becoming more and more apparent as new and complicated problems of government and finance develop with the progress of the new national reform movement. The finances of the country are suffering from the lack of support accorded the Prince Regent by the provincial authorities and, instead of having the benefit of the advice of experienced councillors, the solution of the financial problem daily becomes a more serious task for the lack of it.

It is only natural that the absence of H. E. Yuan Shih-Kai should be noted at this juncture and a well defined sentiment develop favoring his recall.

We find the *London Times* strong in its endorsement of the retired Ex-Grand Councillor as "the one man who in late years has shown energy and strength of will" and urges his prompt recall.

The Empress Dowager is reported to have told the Prince Regent that if he carried out his intention to reinstate Yuan Shih-Kai she would

promptly assume the reins of government. Many conflicting reports emanate from Peking respecting this subject but it is generally conceded that the matter of his recall was among the subjects presented by the Prince Regent for the consideration of the Senate.

A telegram from Peking to the *North China Daily News* under date of September 6 stated that reports in the Chinese Press have been varied on the re-employment of the ex-Grand Councillor Yuan Shih-kai, and it is stated that, as the Peking Government intends to reinstate Yuan, a certain foreign Power is opposed to the idea and will make efforts to frustrate the proposal. While it is stated that the Government has decided to restore him to power in the Grand Council, another report has it that Yuan has refused to accept office in spite of requests from several high officials. It is also said that President Yin Chang strongly recommended Yuan Shih-kai for his pre-eminent capability, and when the Government sought the views of the Viceroys and Governors in the Empire on the question, the majority were in favor of Yuan's reinstatement."

Again on September 8th the announcement was made that the negotiations with Yuan Shih-kai regarding his reinstallation to office are going on, and it appears to be a mere question of time that he will again enter the Imperial service. Apart from an office within the Central Government of Peking there might be taken into consideration for Yuan Shih-kai the post of a Viceroy. The tendency of the Prince Regent to assemble around himself as much as possible of strong men is evident, and may be considered as a token of his strong will to introduce earnest actual reforms.

The Grand Councillors seem willing to placate the growing sentiment in the Ex-Grand Councillor's favor and have recommended that he be appointed viceroy of some province.

His old friend, H. E. Tong Shao-yi, recently appointed President of the Ministry of Communications, is reported to have visited Yuan Shih-kai at Changtefu on October 3, but the outcome of the visit has not been made public. It will be remembered H. E. Tang Shao-yi was the right hand man of Yuan Shih-kai for many years and it was during his absence on a world tour, studying foreign financial systems, that the Imperial deaths occurred followed by the retirement of Yuan Shih-kai. Upon his return he was not warmly received and up to his recent appointment lived in retirement. The friends of Yuan Shih-kai saw in his recent appointment a change of heart on the part of the Prince Regent and they looked forward hopefully to his early reinstatement.

So far as can be learned Yuan Shih-kai does not propose to respond unless his course throughout is fully justified by complete restoration to his former position and honors. He has been most reserved since his retirement and this alone has strengthened his position.

A Chinese report published in the *North China Daily News* is to the effect that Yuan Shih-kai asked General Wang Shih-chen to meet him at Changteh, to discuss important affairs and that the latter complied with the request. Later Yuan Shih-kai telegraphed to the Grand Council expressing his unwillingness to rejoin the public service. He also made certain suggestions, which were presented to the Prince Regent for perusal.

The *North China Daily News* while strongly endorsing Yuan Shih-kai believes it would be wiser for him to remain in retirement until after loans now proposed have been concluded unless he could count on "absolute freedom from court and official intrigue." That journal says:

"As far as the outside world has been able to judge, Yuan Shih-kai has added to his reputation by his correct attitude during his retirement. If he returns to power, it seems probable that it will be at the solicitation of the Peking Government and not as a result of intrigue on his part. He will, therefore, be well advised to accept nothing but the highest post and to display no anxiety to obtain even that. So convinced are we that China is in a bad way, that one strong personality with progressive ideas and breadth of vision at the head of things is required

for her rehabilitation and that no one has shown himself more capable for the post during these twenty months than Yuan Shih-kai, that we should regret to see him jeopardize his country's future by a false or premature move. Indeed, the better course might conceivably be to refuse office for some time longer. Every thing points to the Central Government's being obliged to contract a loan to enable it to carry on the administration. The first step is apparently being taken by H. E. Liang Tun-yen who is credited with a mission abroad to raise a loan of some Tls. 12,000,000 for the purpose of establishing a bank. With such loans will be introduced some measure of foreign supervision, and the initial steps in this direction may prove most unpopular. Unless Yuan Shih-kai could count on absolute freedom from Court and official intrigue, it might be wiser for him not to accept office until these loans have been negotiated. If, on the other hand, he can be sure of himself and of his position, it would be better to have a voice in the disposal of the money that is absolutely necessary for carrying out the numerous reforms to which the Government has pledged itself."

OBITUARY

The news of the death of Mr. William C. Cowie, Chairman and Managing Director of the British North Borneo Company, September 14th, at the age of 62 years, was a severe shock to the many friends of the British North Borneo pioneer. The *London and China Express* pays a warm tribute to the memory of the deceased which we quote in part:

"Mr. Cowie, who has been associated with Borneo for very nearly forty years, has been a director of the Chartered Company for many years, has been managing director for about a decade, but has only held the position of Chairman of the Court of Directors for rather less than a year. His colleagues elected him to this position because of the grasp he had of the company's affairs and the labour he had ungrudgingly given—in season and out of season, it may be remarked—to foster the development of the 30,000 square miles of territory owned by the company. His energy and his extremely sanguine temperament were assets of great value in formulating schemes for the material progress of the country. When he was elected chairman in October of last year it was generally conceded that he had fairly earned the distinction. Mr. Cowie was also on the boards of the Beaufort Borneo Rubber Company, the British North Borneo Exploration Company, Langkon North Borneo Rubber, Manchester North Borneo Rubber, Membakut Rubber, and North Borneo State Rubber. He had had a most adventurous life. He was manager of the Wardmill Works at Arbroath of Messrs. M. C. Thomson and Co., Glasgow. Mr. Cowie, having finished his apprenticeship at Arbroath, went to Glasgow, where he afterwards shipped as chief engineer on board a small steamer, named the *Argyle*, bound for Singapore. This was at the age of 19. He entered the service of the Sultan of Rhio and Linga to whom the *Argyle* had been sold. Afterwards in partnership with a merchant named Shomburgk, he traded in the Sulu Archipelago, the Labuan Trading Company being formed by them.

"It will be unnecessary here to detail the part taken by Mr. Cowie in the various steps by which North Borneo became British. Mr. (Rajah) Torrey, an American, was the first on the scene, then followed the late Baron Overbeck (a partner in Dent and Co.), and Mr. (now Sir) Alfred Dent is another name that will occur, but it was Mr. Cowie's influence with the Sultans of Brunei and Sulu that was a chief factor in that stage. In those early pioneering days, head-hunting, piracy, and slavery were rampant, and, we hope, received their quietus with the death of Mat Salleh. Life and property were absolutely insecure, and chaos reigned supreme throughout the land. Now, it is claimed, the Chartered Company's territory is a model colony, and life and property are as safe there as they are in any other part of the British Empire.

"Owing to strenuous efforts of the late Mr. Cowie, and his indefatigable work, the net

revenue has greatly increased, and with the capital now being poured into the country through the creation of a number of rubber-planting companies, a new vista has been opened. The results of this policy, so largely fostered by Mr. Cowie, he has not been spared to see; he was only destined to know that both from an Imperial point of view, and also as affording a splendid field for the profitable employment of British surplus capital, North Borneo had received some part of the recognition that its capabilities merited."

REVIEWS

Desk Book, prepared under the direction of John S. Leech, Director of Printing, Manila, and compiled by a committee of employees consisting of Messrs. Samuel H. Musick, Walter R. Johns, and Walter F. McLennan.

"*Desk Book*" is a significant title to all editors and printers, but we have yet to review a compilation that covers the field of constructive typography more comprehensively. The volume itself is typographically, as model, the best recommendation of the excellent compilation of modern type styles and their application by demonstration presented in the most attractive form. It is an education in itself. Authors, bookbinders, compositors, copyholders, imposers, photo engravers, pressmen, proof readers, requisitioners, stereotypers and electrotypers have been provided with a fund of technical information that will prove of inestimable value in securing expedition and thoroughness in their work. Besides the above, a manual of style and a compilation of useful information is included that deserves especial commendation.

This work was compiled for the guidance of the officials and employees of the Bureau of Printing, Manila, but it might well be utilized to great advantage as a compendium of practical information by every modern publishing house. We regret that the work has not been put on sale as we believe it would be warmly welcomed by every editor, publisher and printer to whom the beautiful in typography makes special appeal.

Who's Who in Mining and Metallurgy for 1910.—Issued from the presses of the *Mining Journal*, London. Price 15s. net.

The second edition of this valuable work maintains the high standard of its initial form and may be said to be the most complete and reliable epitome of the world's mining industry. "Who's Who in Mining and Metallurgy" is a brave departure involving an enormous responsibility and much hard work, but its reception has fully rewarded the editors and publishers. It should find a place in every public library and no one interested in the large field of mining should fail to keep it among his collection of books of reference.

Paulino, a Tale of the Philippines, by George A. Miller.—The Methodist Publishing House, Manila.

This brochure deals with the religious situation in the Philippines, with special reference to the reception by the natives of the separation of church and state upon American occupation. The author includes some graceful pen pictures of native life and customs and weaves into his work the romance of two lowly characters who pass through many trials not disassociated with spiritual perplexities and persecutions, to live happily ever after.

Concrete from Sand Molds.—By A. A. Houghton, author of "Ornamental Concrete, Without Molds," "Practical Use of Concrete," etc., the Norman W. Henley Publishing Co., New York. Price, \$2.00 U. S. C.

This work includes fifteen chapters devoted to the process of molding concrete with sand molds and demonstrating the ease, rapidity and economy of the process. It also covers the field in detail with regard to ornamental designs, involving a process that has hitherto been regarded as a trade secret.

RAILWAYS OF THE PHILIPPINES FOR 1910

In concluding his report covering the fiscal year ended June 30th, 1910 Mr. Loomis F. Goddard, Supervising Railway Expert for the Philippine Government, says:

"The increased and increasing prosperity of the islands is reflected by the results of the operation of the rail lines shown by the increasing incomplete reports herein, and the indications are that much more satisfactory returns will be made for the fiscal year, 1911."

The following excerpts from Mr. Goddard's report indicate the progress made during the twelve months and the tables accompanying them will be of interest:

LEGISLATIVE OR ADMINISTRATIVE ACTS DURING THE YEAR RELATING TO OR AFFECTING RAILROADS.

Manila Railroad Company.—Act No. 1905, enacted by the Philippine Legislature on May 19, 1909, covering guaranty of interest on the bonds of the Manila Railroad Company on its lines south of Manila, the Baguio line and the New Port line at Manila, was formally accepted by the Manila Railroad Company on August 2, 1909, and said Act became fully effective on January 28, 1910, when the Honorable, the Secretary of War of the United States approved the waiver of the lien of the then existing mortgages on the Southern Lines of the Manila Railroad, as required by Act No. 1905.

Philippine Railway Company.—On application being made by this Company on August 23, 1909, for an extension of the time for filing final plans of its lines on the Islands of Panay and Negros, the Acting Governor-General, on September 20, 1909, extended this time indefinitely, with the proviso that these plans shall be submitted for approval within thirty days after they have been requested by the Government.

GENERAL REVIEW.

The condition of construction, the results of operation, and statistics in relation to the Railroads of the Philippine Islands on June 30, 1910, and for the fiscal year ended June 30, 1910, unless otherwise shown, are given below.

MANILA RAILROAD COMPANY.

Construction.

During the fiscal year 38.4 kilometers of grading were completed; 34.6 kilometers of track laid, and 27.4 kilometers of line put in operation.

In detail, progress from the beginning of work under Acts No. 1510 and 1905 to July 1, 1910, is as follows:

Dagupan-San Fernando Line (Port Line, San Fernando.)
Total length of line.....73.8 kilometers.
All of which has been located and the plans approved by the Governor-General.
Grading completed.....53.3 kilometers.
Track laid.....43.9 kilometers.
Length of line in operation.....43.0 kilometers.
Opened for operation during the year:
Agoo to South Aringay, July 26, 1909.....6.4 kilometers.
Track yet to lay.....29.9 kilometers.

Camp One Line.
Total length of line.....20.5 kilometers.
This line was opened for operation to near Camp One March 23, 1908.....19.4 kilometers.

Baguio Line.
No work of any kind has been done on this line.

Paniqui-Tayug Line.
Total length of line.....48.7 kilometers.
Surveys completed.....48.7 kilometers.
Plans presented for approval of Government.....34.0 kilometers.
Location approved by Governor-General.....34.0 kilometers.
Grading completed.....34.0 kilometers.
Track laid.....15.0 kilometers.
Track yet to lay.....33.7 kilometers.
No track has been laid on this line during the year. It was opened for operation.
Paniqui to Cuyapo June 30, 1908.....15.0 kilometers

San Miguel-La Paz Line.
Total length of line.....18.4 kilometers.
Nothing has been done on this line during the year.
Line has been located but will probably be revised.

Dau-Magalang Line.
Total length of line.....9.0 kilometers.
This line is entirely completed and was opened for operation on December 20, 1907.

San Fernando-Florida Blanca Line.
Total length of line.....24.5 kilometers.
This line is entirely completed and was opened for operation April 10, 1908.

San Fernando-Arayat Line.
Total length of line.....20.0 kilometers.
Surveys have been completed and the location approved by the Governor-General, but no work of construction has been done.

Mariquina-Montalban Line.
Total length of line.....12.9 kilometers.
This line is entirely completed and was put in operation April 17, 1907.

Antipolo Line.
Total length of line covered by Act No. 1510.....9.4 kilometers.
This line is entirely completed and was opened for operation on December 24, 1908.

New Port Line, Manila.
Preliminary surveys only have been made on this line.

Belt Line, Manila.
Total length of line, (3.0 kilometers double track).....9.6 kilometers.
This line is entirely completed and single line was put in operation in April, 1908.
That portion of Belt Line which, under Act No. 1905 forms part of the "Southern Lines" will hereafter be included in the Batangas Line, or the Main Line South.

Batangas Line.—(Batangas to Bauan; Port Line, Batangas; Camp McGrath Spur.)
Total length of lines.....112.3 kilometers.
Surveys completed.....102.6 kilometers.
Plans presented for approval of Government.....102.6 kilometers.
Location approved by Governor-General.....102.6 kilometers.
Grading completed.....86.2 kilometers.
Track laid.....78.7 kilometers.
Total line opened.....75.4 kilometers.
Line opened during the year:
Maquiling to Santo Tomas, Sept 8, 1909.....4.8 kilometers.
Santo Tomas to Tanauan, January 8, 1910.....3.0 kilometers.
Tanauan to Santo Toribio, June 4, 1910.....13.1 kilometers.
Track yet to lay.....33.6 kilometers.

Cavite Line.—(Wyes at Binacayan.)
Total length of line.....32.7 kilometers.
Surveys completed.....32.2 kilometers.
Plans presented for approval of Government.....32.2 kilometers.
Location approved by Governor-General.....32.2 kilometers.
Grading completed.....32.2 kilometers.
Track laid.....32.2 kilometers.
Line opened to San Roque, May 24, 1908.....32.2 kilometers.
Owing to change of the initial point of this line at Paco in connection with Act No. 1905, length of line has been increased 0.2 kilometer.

CYANIDING IN THE PHILIPPINES (Continued from page 166.)

the tailings from stamps after amalgamation. The principal point of difference is that it had six leachers of 50 tons capacity, where the Consolidated mill originally had four of 60 tons capacity. The character of the ore treated in the Bua mill is entirely different from that of the Consolidated, for, while the former is quartz and iron pyrites, with strong acid reaction and high values in slimes after crushing, the latter is chiefly calcite and rhodochrosite with more or less black oxide of manganese, the whole having a distinctly alkaline reaction, and giving a slime, on crushing, of low value. The treatment has therefore been simpler, and the results generally better on this ore.

The chief improvement which has been worked out on the Bua treatment since its inception has been the practice of turning the charge

over by hand after the water has been drained off and before the solution has been put on. This is done by beginning near one edge of the tank and shoveling back crescent shaped sections and then with opening to start with turning over the material clear across the tank. With cheap labor, the cost is slight, four Igorots at 25 cents gold turning over 50-ton charge in a day. It is claimed that it increases the extraction by several per cent. and shortens the period of treatment by two or three days.

The Bua product has always been high grade and clean, owing to the absence of copper in the ore and a solution fairly free from salts. While actual operations on a commercial scale have been limited to the two properties mentioned, yet extensive tests on lots of ores from several properties in Masbate have invariably given high extraction results by fine grinding, agitation and filtration, but poor results from leaching. The all-slitting method would seem

to have a wider application than leaching in all the districts where cyaniding is applicable to all in the one case where leaching has been given good results, it is an open question whether, with cheap water power available, fine grinding would not give returns sufficiently better to more than pay the difference in cost.

Cyaniding will probably not be successfully applied to the ores of the Paracale district, because these as a rule contain considerable amount of base metals, and gold is coarse, both of which conditions are against cyaniding. However, it is probable that further deposits of ore in which the gold is finely divided will be found in the islands and if such deposits are free from copper and other deleterious substances, and are fairly large, so as to assure a good tonnage, they will not need to be high grade in order to be worked at a profit by the cyanide process in its present highly developed state.

Naic Line.—(Wyes at Noveleta.)

Total length of line.....	19.9 kilometers.
Survey completed.....	19.9 kilometers.
Plans presented for approval of Government.....	19.9 kilometers.
Location approved by Governor-General.....	19.9 kilometers.
Grading completed.....	12.3 kilometers.
Track laid.....	None.

Calamba-Santa Cruz-Magdalena Line.

Total length of line.....	48.3 kilometers.
Survey completed.....	15.3 kilometers.
Plans presented for approval of Government.....	15.3 kilometers.
Location approved by Governor-General.....	15.3 kilometers.
Grading completed.....	15.3 kilometers.
Track laid.....	8.4 kilometers.
Line opened.....	None.
Track yet to lay.....	39.9 kilometers.

Santo Tomas (Luta) Lucena Line.

Total length of line.....	63.2 kilometers.
Survey completed.....	63.2 kilometers.
Plans presented for approval of Government.....	63.2 kilometers.
Location approved by Governor-General.....	63.2 kilometers.
Grading completed.....	12.0 kilometers.
Track laid.....	2.4 kilometers.
Line opened.....	None.
Track yet to lay.....	60.8 kilometers.

Lucena-Nueva Caceres Line.

Total length of line, (approximate).....	228.3 kilometers.
Nothing has yet been done on this line.	

Legaspi-Nueva Caceres Line.—(Legaspi to Tabaco; Legaspi Port Line; Tabaco Port Line; Ligao East; Tabaco West; Pili to Lagonoy.)

Total length of line, (approximate).....	191.4 kilometers.
Surveys completed.....	102.6 kilometers.
Plans presented for approval of Government.....	80.9 kilometers.
Location approved by Governor-General.....	31.0 kilometers.
Grading completed.....	16.0 kilometers.
Track laid.....	1.0 kilometer.
Line opened.....	None.

Under Act No. 1510 the Manila Railroad Company was required to have 240 kilometers of its lines completed on September 12, 1909. As a matter of record 235.1 kilometers had been completed on that date.

Act No. 1905 extends the time of completion of the lines covered by Acts No. 1510, 1714 and 1905 to September 12, 1918.

At the end of the fiscal year 1910 there remained to be completed approximately 732.5 kilometers of line, which will require the construction of about 90.0 kilometers per year to fulfill this condition of the contract.

PHILIPPINE RAILWAY COMPANY.

Island of Cebu.—Construction.—The work of construction on this Island, nearly completed more than a year ago, has not yet been entirely finished. There remains to be charged to construction account, so far as known at present, additional stores, additional equipment, the finishing of three station lay-outs recently approved, the reconstruction of the water supply at Argao and Carcar, the construction of the second track to the wharf at Cebu, which latter work will probably not be required for some years, and the construction of two warehouses and a track to the sea at Argao, which work, although approved, will probably not be done.

Certificates for the issuance of bonds for the construction of the railroad line on this Island to the end of the fiscal year have been made as follows:

Date of Certification	First Bond Section 32.2 kilometers	Second and Partial Bond Sections 63.4 kilometers	Total
Previous fiscal years.....	\$1,443,000.00	\$1,597,000.00	\$3,040,000.00
April 9, 1910.....	40,000.00	112,000.00	152,000.00
Totals.....	\$1,483,000.00	\$1,709,000.00	\$3,192,000.00

The above values are in United States currency.

As the length of this line is 59.4 miles (95.6 kilometers) bonds have been issued at the rate of \$53,737.38 per mile, or P66,778.24 per kilometer.

Island of Panay.—Location.—Except for the terminal at Batan, the location of the line on this Island has been presented and approved.

Grading and Track Laying.—At the end of the fiscal year the grade and track were preliminarily completed from Iloilo north 87.2 kilometers (54.2 miles) and from Capiz south 14.3 kilometers (8.9 miles), with the remainder of grade between the completed portions approximately 90% done, leaving 14.8 kilometers (9.2 miles) of uncompleted grade and track between the terminals mentioned, with the probability of very little delay to the track work, except at bridges.

General.—Permanent bridge structures have been completed, with few exceptions, from Iloilo north 78.8 kilometers (49.0 miles); final ballasting has been completed from Iloilo north 68.4 kilometers (42.5 miles), and permanent station buildings have been completed (except at Iloilo) from the same terminal for 83.3 kilometers (51.8 miles), with the terminal buildings at Capiz practically finished.

The work of constructing the terminal at Lopus (Iloilo) so far as at present contemplated, is completed, except a comparatively small amount of earthwork filling, the passenger terminal, and wharves for the store and freight houses.

The line between Iloilo and Capiz should be preliminarily completed not later than October 1, 1910, and finally completed by January 1, 1911.

Bonds.—Certificates for the issuance of bonds for the construction of the line on this Island have been made as follows:

Date of Certification	First Bond Section 32.2 kilometers	Second Bond Section 32.2 kilometers	Total.
Previous fiscal years.....	\$1,732,000.00	\$1,108,000.00	\$2,840,000.00
January 6, 1910.....	94,000.00	210,000.00	304,000.00
April 9, 1910.....	66,000.00	37,000.00	103,000.00
Totals.....	\$1,892,000.00	\$1,355,000.00	\$3,247,000.00

The above values are in United States currency.

Bonds have therefore been issued in the amount of \$81,175.00 per mile for the forty miles bonded, or P100,838.51 per kilometer.

With the completion and bonding of the remainder of the line the cost per unit of length should be reduced considerably.

Island of Negros.—The location of the line on this Island has been approved by the Governor-General, except for the terminal at Bacolod, no construction work having been done.

The total amount of grading completed during the year was 30.2 kilometers (18.4 miles), and track laid during the same period 32.1 kilometers (20.0 miles).

Operation.—In addition to the 95.6 kilometers (59.4 miles) in full commercial operation during the year on the Island of Cebu, there were 71.1 kilometers (44.2 miles) technically in construction-operation, with a total of 96.5 kilometers (60.0 miles) in actual construction-operation on the Island of Panay at the end of the year; the average length in construction-operation being about 74.7 kilometers (46.6 miles).

STATEMENT.

Showing Distribution of Rolling Stock as of June 30, 1910

	Cebu Division	Panay Division	Total.
<i>Locomotives.</i>			
Class "A" (50 Tonne).....	1	3	4
Class "B" (35 Tonne).....	4	4	8
Class "C" (14 Tonne)*.....	0	3	3
	5	10	15
<i>Passenger Cars.</i>			
Combination 1st Class and Parlor Car.....	0	1	1
Combination 1st and 2nd Class Coach.....	4 @	2 %	6
Combination Baggage and 2nd Class Coach.....	3 ?	2	5
Second Class Coaches.....	6	5	11
20 Tonne Market Cars.....	6	6	12
30 Tonne Market Cars.....	3	0	3
Small Iligan Cars.....	0	2 (a)	2
	22	18	40
<i>Revenue Freight Cars.</i>			
7 Tonne Box Cars.....	0	4 (a)	4
10 Tonne Flat Cars.....	2	11	13
20 Tonne Flat Cars.....	1	4	5
30 Tonne Flat Cars.....	0	22	22
40 Tonne Flat Cars.....	8	38	46
10 Tonne Box Cars.....	7	16	23
20 Tonne Box Cars.....	13	9	22
10 Tonne Stock Cars.....	2	2	4
20 Tonne Stock Car.....	0	1	1
	33	107	140
<i>Work Cars.</i>			
40 Tonne Flat Cars (Derricks).....	1	2	3
40 Tonne Flat Car (Pile Driver).....	0	1	1
30 Tonne Roger Ballast Cars.....	15	47	62
	16	50	66

(a) Cars from Iligan Military Line, Purchased Locally.

* Dutch Locomotives Purchased Locally.

@ Two Converted From Second Class Coaches.

% One Converted From Second Class Coach.

? One Converted From Second Class Coach.

Equipment Originally Purchased.

4	Locomotives, Class "A" (50 Tonne).
8	Locomotives, Class "B" (35 Tonne).
4	Combination 1st Class and Parlor Cars.
4	Combination Baggage and 2nd Class Coaches.
15	Second Class Coaches.
40	Ten Tonne Cars.
40	Twenty Tonne Cars.
25	Thirty Tonne Cars.
50	Forty Tonne Cars.
62	Thirty Tonne Roger Ballast Cars.

Some reductions have been made in the freight rates during the year and on July 20, 1909, a third class passenger rate of one and one-half centavos per kilometer was put in effect, all of which has been productive of good results, and it is believed that further reductions, particularly in freight rates would be of benefit.

Seeds, plants, agricultural implements and machinery, when for the use of the inhabitants along the line, have been transported without charge since July 6, 1909.

As heretofore, it is noted that a much larger area placed under cultivation follows the extension of railway lines, and it is hoped and expected that the additional earnings resulting therefrom will, in a few years time by economical management, be sufficient to pay operating expenses and at least a portion of the heavy fixed charges.

DAET TRAMWAYS.

This company operates a line 7.24 kilometers connecting Daet and Mercedes in the Camarines. Carabao are used for motor power and the traffic is largely in hemp and passengers. During the year, according to Mr. Goodale's report, 15,000 passengers and 6,131 tons of freight were transported.

The total revenue for the year 1910 amounted to P20,651.66, an increase of P3,713.26 over the previous year, while the operating expenses amounted to P14,179.37, an increase of P1,636.64 over the previous year. The net income amounted to P6,472.29, an increase of P2,076.62. The percentage of operating expenses to operating revenue was 68 in 1910 as against 74 in 1909.

LENGTH OF LINES IN OPERATION.

TERRITORY COVERED	KILOMETERS.					
	1908			On June 30, 1910.		
	Main Line	Sidings	Total	Main Line	Sidings	Total
Main Line:						
Manila to Dagupan.....	195.4	41.3	236.7	195.4	41.3	236.7
Cabanatuan Branch:						
Bigaa to Cabanatuan.....	91.5	8.0	99.5	91.5	8.0	99.5
Antipolo Branch:						
Manila to Antipolo.....	33.9	4.2	38.1	33.9	4.2	38.1
Mariquina Branch:						
Rosario to Montalban.....	17.5	1.2	18.7	17.5	1.2	18.7
Stotsenberg Branch:						
Dau to Stotsenberg.....	7.0	1.3	8.3	7.0	1.3	8.3
Dau-San Pedro-Magalang Branch:						
Dau to San Pedro Magalang.....	9.0	1.2	10.2	9.0	1.2	10.2
Florida Blanca Branch:						
San Fernando to Florida Blanca.....	24.5	2.9	27.4	24.5	2.9	27.4
Camp One Branch:						
San Fabian to Camp One.....	19.5	1.5	21.0	19.5	1.5	21.0
San Fernando Union Line:						
Dagupan to South Aringay.....	36.5	3.3	39.8	43.0	....	43.0
Cavite Branch:						
Paco to San Roque.....	32.0	3.6	35.6	32.2	3.6	35.8
Tayug Branch:						
Paniqui to Cuyapo.....	15.0	1.1	16.1	15.0	1.1	16.1
Batangas Line including Belt:						
Santa Mesa to Santo Toribio.....	41.0	4.2	45.2	78.5	....	78.5
TOTALS.....	522.8	73.8	596.6	567.0	66.3	633.3

There was no change in length of operated lines during the calendar year 1909.

No rail was relaid on operated lines, and but little permanent bridge work was done during the year.

Track was kept in excellent condition.

The results of operation for the calendar years of 1908 and 1909 were as follows:

REVENUE FROM TRANSPORTATION (a).				
	1908	1909	Decrease	Increase
Freight Revenue.....	P741,846.12	P783,571.47		P41,725.35
Passenger Revenue.....	1,352,029.58	1,220,006.27	P132,023.31	
Mail Revenue.....	28,761.61	17,827.67	10,933.94	
Miscellaneous.....		13,620.34		13,620.34
TOTALS.....	P2,122,637.31	P2,035,025.75	P87,611.56	
REVENUE FROM OPERATION OTHER THAN TRANSPORTATION (a)				
	1908	1909	Decrease	Increase
Station and train privileges.....	In Rents.	P4,196.32		P4,196.32
Storage of Freight.....	In Freight.	1,075.00		1,075.00
Storage of Baggage.....	In Freight.	11.66		11.66
Rents of buildings and property.....		4,944.08	P25,156.89	
Miscellaneous.....		2,370.89		2,370.89
TOTALS.....	P30,100.97	P12,597.95	P17,503.02	

(a) For the main line, Manila to Dagupan, and the Cabanatuan Antipolo, Mariquina and Stotsenberg Branches only.

OPERATING EXPENSES (a).				
	1908	1909	Decrease	Increase
Maintenance of Way and Structures.....	P240,046.53	P229,901.96	P10,144.57	
Maintenance of Equipment.....	385,625.41	122,913.88	262,711.53	
Traffic Expenses.....		18,313.54		P192,032.45
Transportation Expenses.....	270,741.46	444,460.37		
General Expenses.....	115,345.85	85,190.04	30,155.81	
TOTALS.....	P1,011,759.25	P900,779.79	P100,979.46	
OPERATING INCOME (a).				
	1908	1909	Decrease	Increase
Total Operating Revenue.....	P2,152,738.28	P2,047,623.70	P105,114.58	
Total Operating Expenses.....	1,011,759.25	900,779.79	110,979.46	
Net Operating Revenue.....	P1,140,979.03	P1,146,843.91		P5,864.88
Taxes.....	15,536.91	10,238.09	P5,298.82	
Operating income.....	P1,125,442.12	P1,136,605.82		P11,163.70
Percentage of Operating Expenses to Gross Operating Revenue.....	47.0	44.0	3.0	
(a) For the main line, Manila to Dagupan, and the Cabanatuan, Antipolo, Mariquina and Stotsenberg Branches only.				
	1908	1909	Decrease	Increase
Passenger revenue per train kilometer.....	P1.168	P1.633		P0.465
Freight revenue per train kilometer.....	3.087	3.185		0.098
Total revenue per train kilometer.....	P1.493	P2.049		P0.556
Operating expenses per train kilometer.....	0.712	0.907		0.951
Net revenue per train kilometer.....	P0.781	P1.142		P0.361
Passenger revenue per kilometer of line.....	P4,113.17	P3,559.99	P553.18	
Freight revenue per kilometer of line.....	2,209.85	2,286.47		P76.62
Miscellaneous revenue per kilometer of line.....	89.67	91.76		2.09
Total revenue per kilometer of line.....	P6,412.69	P5,938.22	P474.47	
Operating expenses per kilometer of line.....	3,013.88	2,628.48	385.40	
Net revenue per kilometer of line.....	P3,398.81	P3,309.74	P89.07	
Average amount received per kilometer per passenger.....	P0.0202	P0.0211		P0.0009
Average amount received per passenger.....	0.5088	0.6000		0.0912
Average amount received per tonne of freight per kilometer.....	0.0302	0.0342		0.0040
Average amount received per tonne of freight.....	2.3052	2.1952	P0.1100	
Average haul per passenger, kilometers.....	25.00	28.58		3.58
Average haul per tonne of freight, kilometers.....	76.00	65.86	10.14	
Passengers hauled one kilometer.....	58,276,903	57,780,190	496,713	
Tonnes of freight hauled one kilometer.....	19,253,495	22,912,071		3,658,576
The equipment of this line was:				
	1908	1909	Decrease	Increase
Passenger and freight engines.....	72	88		16
First class passenger cars.....	9	9		
First and second class passenger cars.....	10	25		15
Second class passenger cars.....	10	10		
Third class passenger cars.....	86	91		5
Inspection cars.....	2	3		1
Freight cars.....	1046	1055		9
Miscellaneous cars.....	67	53	14	

Accidents during the year were:
82 Class A, serious;
36 Class B, not serious; and
118 Class C, minor.

In addition to minor interruptions to the traffic of the line on account of washouts, serious trouble was occasioned by the "baguios" of October 17th and 24th, 1909, operation being suspended for some days on the line north and south of Dagupan, and for some weeks on the line to Camp One.

NOTE.—The report of the operation of the Manila Railroad Company is for the year ended December 31, 1909.

The Dau-San Pedro Magalang and the Florida Blanca Branches of this Railroad were placed in full commercial operation on January 1, 1910, prior to which time these branches had been in construction-operation, the cost of and earnings from operation having been charged and credited to construction account.

None of the guaranteed lines under Act No. 1905 had been placed in full commercial operation at the end of the fiscal year. It is the intention to do so, however, as of May 1, 1910, on the first three bond sections (forty miles of the Batangas Line and twenty miles of the Cavite Line) when authority to issue bonds on these sections is requested, which is expected to be about July 15, 1910.

The results obtained from the construction-operation of guaranteed lines preliminary completed indicate that their earnings will be sufficient to not only pay operating charges, but to care for the interest on bonded indebtedness.

MANILA ELECTRIC RAILROAD AND LIGHT COMPANY AND MANILA SUBURBAN RAILWAYS COMPANY.

Construction.—No work of construction has been done during the year.

Operation.—The results of operation of these lines for the fiscal years 1909 and 1910 were as follows:

Manila Electric Railroad and Light Company.—Kilometrage of Lines in Operation.

	Fiscal year 1909				Fiscal Year 1910.			
	Main Line	Second Track	Sidings	Total	Main Line	Second Track	Sidings	Total
Kilometrage.....	39.8	17.2	6.2	63.2	39.8	17.2	6.2	63.2
Operating Revenue.								
	F. Y. 1909		F. Y. 1910		Decrease		Increase	
Revenue from Transportation.....	P 948,822.97		P 1,040,303.86				P 91,480.89	
Miscellaneous Revenue.....	77,553.23		84,308.45				6,755.22	
Totals.....	P 1,026,376.20		P 1,124,612.31				P 98,236.11	
Operating Expenses.								
	F. Y. 1909		F. Y. 1910		Decrease		Increase	
Maintenance of Way and Structures.....	P 80,502.83		P 56,151.40		P 24,351.43			
Maintenance of Equipment.....	94,810.22		113,107.40				P 18,297.18	
Traffic and Transportation Expenses.....	211,286.06		229,060.14				17,774.08	
Miscellaneous Expenses.....	Not given.		207,892.40*					
Totals.....	P 594,662.78*		P 606,211.34*				P 11,548.56*	
Operating income	P 431,713.42		P 518,400.97				P 86,687.55	
Percentage of Operating Expenses to Gross Revenue.....	57.9		53.9		4.0			
*Estimated.								

General Information.

	F. Y. 1909	F. Y. 1910	Decrease	Increase
Total number of paying passengers carried.....	10,437,841	12,379,248		1,941,407
Average earnings per passenger.....	P 0.0980	P 0.0908	P 0.0072	
Average expense per passenger.....	0.0570	0.0489	0.0081	
Net earnings per passenger.....	P 0.0410	P 0.0419		P 0.0009
Equipment consisted of				
Motor cars.....	105	105		
Work cars.....	1	1		
Wrecking cars.....	1	1		
Water sprinklers.....	1	1		

MANILA SUBURBAN RAILWAYS COMPANY.

Kilometrage of Lines in Operation.

	Kilometrage of Lines in Operation.				Fiscal Year 1910			
	Fiscal Year 1909				Fiscal Year 1910			
	Main Line	Second Track	Sidings	Total	Main Line	Second Track	Sidings	Total
Kilometrage.....	9.9	.....	1.7	11.6	9.9	.....	1.7	11.6
<i>Operating Revenue.</i>								
	F. Y. 1909		F. Y. 1910		Decrease		Increase	
Revenue from Transportation.....	P 189,212.70		P 214,631.52				P 25,418.82	
Miscellaneous Revenue.....	1,543.30		1,038.88		P 504.42			
Totals.....	P 190,756.00		P 215,670.40				P 24,914.40	
<i>Operating Expenses.</i>								
	F. Y. 1909		F. Y. 1910		Decrease		Increase	
Maintenance of Way and Structures.....	P 8,856.36		P 26,002.68				P 17,146.32	
Maintenance of Equipment.....	527.91		142.46		P 385.45			
Traffic and Transportation Expenses.....	Valueless.		24,451.86					
Miscellaneous Expenses.....	Valueless.		72,844.22*					
Totals.....	P 95,823.99		P 123,441.22*				P 27,617.23	
Operating income.....	P 94,932.01		P 92,229.18		P 2,702.83			
Percentage of Operating Expenses to Gross Revenue.....	50.2		57.3				7.1	
*Estimated.								

General Information.

	F. Y. 1909	F. Y. 1910	Decrease	Increase
Total number of paying passengers carried.....	2,702,227	3,173,692		471,465
Average earnings per passenger.....	P 0.0700	P 0.0679	P 0.0021	
Average expenses per passenger.....	0.0350	0.0388		P 0.0038
Average net earnings per passenger.....	P 0.0350	P 0.0291	P 0.0059	
Equipment consisted of				
Motor cars.....	6	6		
Motor cars, freight.....	3	3		
Flat cars.....	4	4		

A summary of the grading and track laying completed, with kilometrage of lines put in operation during the year, is shown in the following table:

	KILOMETERS		
ROAD.	Grading Completed	Track Laid	Lines Opened
Manila Railroad Company.....	38.4	34.6	27.4
Manila Electric Railroad and Light Company.....			
Manila Suburban Railways Company.....			
Tarlac Railway Company.....			
Daet Tramway Company.....			
Philippine Railway Company.....	30.2	32.1	8.1
Insular Coal Company.....			
Totals.....	68.6	66.7	35.5

The following table gives kilometrage of railroad lines authorized by law in the Philippine Islands, with the length constructed, to be constructed, and in operation on June 30, 1910.

ROAD.	Authorized	Constructed in operation	Constructed not in operation	To be constructed
Manila Railroad Company.....	1,315.5a	567.0	16.0	732.5a
Manila Electric Railroad and Light Company.....	45.0	39.8		5.2
Manila Suburban Railways Co....	19.9	9.9		10.0
Tarlac Railway Company.....	20.6	20.6		
Daet Tramway Company.....	7.2	7.2		
Philippine Railway Company.....	368.6	168.1	29.0	171.5
Insular Coal Company.....	12.0	12.0		
Totals.....	1,788.8	824.6	45.0	919.2
a Approximate.				

Of the "Northern System" lines of the Manila Railroad Company 457.2 kilometers have been built, leaving 103.1 kilometers yet to build; of the "Southern System" lines 125.8 kilometers have been built, leaving 629.4 kilometers yet to build.

CONTRACTING NEWS

BIDS OPENED.—Bureau of Public Works, Manila.—A two 23-meter span reinforced concrete bridge.—The bidders were: P. Corona and A. Luraschi, P39,489; F. D. Hayden, P40,412; John Gordon, P43,900; A. F. Allen, P48,500; the Atlantic, Gulf and Pacific Company, P55,634; and the Manila Construction Company, P57,352.

A TWO 7-METER SPAN REINFORCED CONCRETE BRIDGE.—Bidders were: F. D. Hayden, P8,500; P. Corona and A. Luraschi, P8,483; Macchetti Brothers, P8,777; Manila Construction Company, P9,790; and John Gordon, P9,400.

GIRDER BRIDGE OF FIVE 5.86 METER SPANS ON REINFORCED PILE BENTS.—Bidders were: A. F. Allen, P11,385 and Corona and Luraschi, P14,800.

PLUMBING AND EQUIPMENT FOR LOS BAÑOS LABORATORY.—Bidders: S. C. Choy, P3,900 for furnishing and equipment and P1,924 for the plumbing; John Gordon, P6,100 for furnishing and equipment, P2,250, plumbing; D. E. Blossom, P2,125 for plumbing; the American Hardware and Plumbing Company P2,804 for plumbing.

ERECTION OF NEW HOSPITAL SERVICE BUILDING, REINFORCED CONCRETE.—Bidders: The Manila Saw Mill Company, P46,980, the work to be completed in 240 days with an additional cost of P165 for the covered passage; The Manila Construction Company P51,275, in 240 days; Coleman and Goodman P52,850 in 240 days; M. B. Zarate P54,400 in 250 days; O. F. Campbell P56,927 in 240 days; and John Gordon P58,700 in 250 days with an additional P110 for the covered passage.

ZAMBOANGA ELECTRIC LIGHT, POWER AND WATER SUPPLY.—There was only one bidder, the Zamboanga Company.

PROPOSALS INVITED.—Tientsin-Pukow Railway (Southern Section). Third Class Passenger Cars. Sealed tenders are invited for the supply to this Railway of twelve (12) third class passenger cars. Specification and Blue Prints of same may be obtained from the Railway Purchasing Agent, Taotai Y. C. Tong, Imperial Chinese Telegraphs, The Bund, Shanghai, on the payment of a fee of Dollars Twenty-five (\$25.00) which amount will be returned, upon application to the Agent, on receipt of a bona fide tender.

Tenders should be addressed to the Managing Director, Tientsin-Pukow Railway, Southern Section, Nanking, and should be clearly marked on the outside "Tender for Twelve Third Class Passenger Cars, Indent No. 104." They will be opened at the Head Office, Nanking, at 10 a. m., 1st December, 1910. No tenders submitted after the hour mentioned will be considered.

Tenderers are requested to carefully note the following conditions: All the Cars must be delivered "ex ship's slings" on the Railway Wharf at Pukow at Contractor's risk and cost, before end of June, 1911. A fine of Five Shillings per Car per day will be deducted from the contract price as liquidated damages for each day car or any part of it remains undelivered after the date mentioned. Customs Duty and Wharfage Dues at Pukow for Railway account, and other charges for Contractor's account.

Quotations must be in Sterling and the names of proposed makers must be stated. Payment will be made Twenty (20) days after complete acceptance of each shipment, in Shanghai or London at Contractor's option.

PUBLIC WORKS DEPARTMENT, SYDNEY, NEW SOUTH WALES.—Coal Loading Plant capable of

delivering into ships' holds about 1,000 tons of coal per hour at each side of a new jetty to be erected at Port Kemble, South Coast, N.S.W. Contractors' Room, Public Works Department, Sydney; and Office of the Agent-General of New South Wales, London. Bids opened January 9th, 1911.

CHIEF QUARTERMASTER, PHILIPPINES DIVISION.—Puttees.—Sealed proposals, in triplicate, subject to the usual conditions, for furnishing 280,000 Pairs Woolen Puttees, will be received here until 11:00 a. m., November 1st, 1910, and then publicly opened. Information and blank forms furnished upon application.

CONSTABULARY CLOTHING SUPPLIES.—Sealed proposals in triplicate, subject to the usual conditions, will be received at the office of the Chief Supply Officer Bureau of Constabulary, Old Oriente Building, Manila, until ten a. m., December 17, 1910, and then opened in the presence of attending bidders for furnishing the Bureau of Constabulary the following articles:

6,000 khaki hats.

24,000 cotton undershirts.

7,500 spiral-cut khaki woolen puttees for enlisted men.

50,000 yards of khaki cloth.

Bids must be accompanied by samples.

Time for delivery to be stated in proposal and to be considered in awarding contract.

Samples may be seen and blank proposals obtained at the office of the Property Officer, Bureau of Constabulary, Old Oriente Building, Manila.

As a guarantee of good faith each proposal must be accompanied by a certified check for ten per cent of bid. Letter of guarantee from bank will be accepted in place of check.

BUREAU OF PUBLIC WORKS, MANILA.—Reinforced Concrete Bridges.—Sealed proposals plainly marked "Proposals for Abucay, Tapulao and Hermosa Bridges," will be received at this office or at the office of the Provincial Treasurer, Balanga, Bataan, P. I., until 11 a. m., November 6th, 1910, and then publicly opened for furnishing all material, labor and plant and constructing complete, three reinforced concrete girder bridges, consisting of three 5.5 meter spans on E. C. Pile bents; two 7.5 meter spans on R. C. Pile bents; and one 8 meter span, located in the Province of Bataan and known as the Abucay, Tapulac and Hermosa bridges respectively, in the manner and on the conditions set forth in the form of proposals, plans and specifications, copies of which with other information may be obtained at either of the above-mentioned offices.

CEBU WATERWORKS.—Sealed bids will be received by the Director of Public Works until 11:00 a. m., November 15, 1910, and thereupon opened, for the furnishing of material for and the construction of Osmeña Water Works System for the Municipality of Cebu, Cebu, Philippine Islands.

The proposed works will consist of a circular reinforced concrete dam with intake appurtenances and value chamber; a concrete spillway; a 4,000,000 gallon reservoir in excavation; a 14" and 16" main pipe line six and a half kilometers long; a distribution system 4" to 14" diameter pipe twenty one (21) kilometer long, and the necessary gates, valves, valve boxes, fire hydrants, and appurtenances.

Specifications, general plans, and blank forms of proposal may be obtained at the office of the Director of Public Works, Manila, P. I., and from the office of the District Engineer, Cebu, P. I.

Each proposal must be accompanied by a certified check for 10% of the amount of the bid drawn by the bidder on a local bank and made payable to the Insular Treasurer as a guaranty that the bidder, if awarded the contract, will, after due notification, promptly enter into contract and furnish acceptable bond in the sum

of twenty (20) per cent or a certified check for ten (10) per cent of the sum total of the contract price for the faithful performance of the work.

The right is reserved to reject any and all bids or waive informalities.

REINFORCED CONCRETE HOSPITAL.—Sealed proposals, in triplicate, subject to the usual conditions, for the construction of Two Concrete Officers Quarters and a Concrete Hospital Ward at Fort William McKinley, P. I., will be received here until 11:00 a. m., October 31st, 1910, and then publicly opened.

SALE OF HULL.—Sealed proposals, in duplicate, will be received at the Office of the Chief Quartermaster, Department of Mindanao, Zamboanga, P. I., until 3:00 p. m. December 7th, 1910, and then opened in the presence of attending bidders for the Hull of the Quartermaster Launch "Atlanta." Proposals must be accompanied by Certified Check, payable to the order of the Chief Quartermaster, Department of Mindanao, in the sum of ten (10%) per cent of the amount of bid. Information furnished upon application at this office. F. G. Hodgson, Assistant Quartermaster General, U. S. Army.

BUREAU OF SUPPLY, MANILA, P. I.—Hay and Oats.—Sealed proposals in triplicate will be received at this office up to 11 a. m. November 10th, 1910, when they will be opened in the presence of the attending bidders, for furnishing and delivering hay and oats.

SCHOOL SUPPLIES.—Sealed proposals in triplicate will be received at this office up to 11 a. m. November 25, 1910, when they will be opened in the presence of the attending bidders, for furnishing and delivering school supplies.

Proper forms and specifications may be had on application to this office.

BUREAU OF PHILIPPINE CONSTABULARY.—Shoes.—Sealed proposals in triplicate, subject to the usual conditions, will be received at the office of the Chief Supply Officer, Bureau of Constabulary, Old Oriente Building, Manila, until ten a. m., February 17, 1911, and then opened in the presence of attending bidders, for furnishing the Bureau of Constabulary

10,000 pairs of shoes.

Bids must be accompanied by samples.

Time for delivery to be stated in proposal and to be considered in awarding contract.

Samples may be seen and blank proposals obtained at the office of the Property Officer, Bureau of Constabulary, Old Oriente Building, Manila.

As a guarantee of good faith each proposal must be accompanied by a certified check for ten per cent of bid. Letter of guarantee from bank will be accepted in place of check.

PUTTEES.—Sealed proposals in triplicate, subject to the usual conditions, will be received at the office of the Chief Supply Officer, Bureau of Constabulary, until ten a. m., January 11, 1911, and then opened in the presence of attending bidders, for furnishing the Bureau of Constabulary

1,000 pairs of puttees, woolen, spiral, for officers.

Bids must be accompanied by samples.

Time for delivery to be stated on proposal and to be considered in awarding contract.

Samples may be seen and blank proposals obtained at the office of the Property Officer, Bureau of Constabulary, Old Oriente Building.

As a guarantee of good faith each proposal will be accompanied by a certified check for ten per cent of bid. Letter of guarantee from bank will be accepted in place of check.

FAR EASTERN RAILWAY NEWS

THE PEKING HANKOW RAILWAY LOAN.—It will be remembered that a loan for £5,000,000 was floated in 1908 for the redemption of this line and recently the announcement was made from Peking that the net earnings during the twenty months since the Government took it over amounted to Tls. 3,640,000. Now comes the report that a further loan of £450,000 has been issued, the proceeds of which will be utilized for repairing the line and adding new equipment. It is pointed out by several newspapers that the net profits are far from an adequate return on capital invested and that the necessity for the further loan to maintain the line in satisfactory condition reflects discredit on the system of operation in vogue which does not provide for proper upkeep within the earning capacity of the line. No official explanation of the conditions that made the loan necessary has been made public.

JAPAN'S RAILWAY DEVELOPMENT.—It is the purpose of the Railway Bureau to supersede the narrow gauge by the standard as rapidly as possible, but it will grant permission for the construction of the smaller gauge by private corporations for the present.

A statue is to be erected in honor of the late Viscount Katsui Inouye who, as Director General of Government Railways, was identified with the rapid growth of intercommunication in the empire.

Workshops covering an area of 3,000,000 square feet are proposed by the Railway Bureau and will be located at a point near Tokyo. The present shops at Shimbashi will be included in this plant, and it is expected they will be opened about the beginning of 1913. These shops will turn out cars, equipment of all kinds and do general repair work.

Recent inspection by the Railway Bureau developed serious damage to railway ties on the different lines occasioned by the destructive work of white ants. An effort is being made to secure a preventative to be applied to all new timber used for this purpose.

Charters were granted last month for the construction of two light railways, one seven miles in length connecting Yoshina and Oyodo to cost 200,000 yen and the other about the same length joining Fukuyama and Tomonosu.

CHINA'S PROJECTED RAILWAYS.—Mr. W. P. Ker, H. B. M. Attaché at Peking, gives the following list of projected lines with approximate mileage:

Kirin—Changchun (Kuanchengtzu) (Chin-Chang) Railway.—This line, the surveys for which are completed, will be 80 miles long; construction was to commence in the spring of this year.

Kirin—Hunchun Railway.—This line will be 240 miles long, and is to be undertaken on the completion of the Kirin—Changchun line.

Chinchowfu—Aigun Railway.—The preliminary agreement for this railway was signed in January, 1910, for American loan and British construction; the length of the line will be 750 miles.

Kalgan—Suiyuan (Chang Sui) Railway.—Preliminary surveys have begun on this line, which will be 180 miles in length, and the route will probably be via Tatungfu. Trains are expected to run as far as Tienchen (Shansi), a distance of 50 miles, in the spring of 1912, and an extension is intended later to Urga and Kiakhta.

Chengtingfu—Tehchow Railway (110 miles).—This line will connect the Peking—Hankow and Tientsin—Pukow railways.

Chefoo—Weihsien Railway (170 miles).—This line will connect Chefoo with the Shantung Railway. Progress is delayed for the want of funds.

Tatungfu—Puchowfu (Tung-P'u) Railway (450 miles).—This railway will connect the north and centre of Shansi province with the Shensi Railway at Tungkwan, south of Puchowfu (see below). Only the construction of the

section from Taiyuan to Pingyaohsien (60 miles) appears to be in immediate contemplation.

Tungkwan—Honanfu (Hsi T'ung) Railway (730 miles).—This line was surveyed in 1909.

Sianfu—Jungkwan (Lo-P'ung) Railway (85 miles).—This line was surveyed in 1909.

Sianfu—Lanchowfu Railway (80 miles).—This line was noted in the programme of the Board of Communications as to be surveyed in 1911, but the project is still somewhat indefinite.

Lanchowfu—Ilifu Railway (1,250 miles).—No definite arrangements have been made.

Kaifeng—Suchowfu Railway (175 miles).—This line was surveyed in 1909.

Suchowfu—Tsingkiangpu (Ching-Hsu) Railway (120 miles).—The construction of this line has been begun from Tsingkiangpu; it is intended to be completed in 1911.

Tringkiangpu—Haichow (Ching-Hai) Railway (70 miles).—This last section is intended to provide an outlet to the sea for the great trunk line from west to east, which will be formed by the execution of projects 8, 9, 12 and 13 above noted, in addition to the existing line from Honanfu to Kaifeng.

Tsingkiangpu—Kwacho (on the Yangtse opposite Chinkiang Railway (more than 100 miles).

Sinyangchow—Fengyang or Pukow Railway (270 miles).

Chaochowfu or Swatow via Waichow to Sheklung to Shunchun Railway (200 miles).—These are alternative projects for connecting Swatow with the Canton district and the Canton—Kowloon Railway.

Macao—Fatshan Railway (on the Canton—Samshui line) (75 miles).—A concession for this line was granted to a Portuguese syndicate in 1902.

Kweilin—Chuanchow (Kwangsi) Railway (80 miles).—Preliminary surveys were made for this railway in 1909, but owing to lack of funds construction has not begun.

Langson—Lungchow Railway (46 miles).—This is the proposed French extension, metre gauge, of the Hanoi—Langson line. It is proposed to continue this line to Nanning (150 miles.)

Yunnanfu—Szechuan Railway (450 miles).—To Suifu or Luchow. Two American engineers were engaged by the Viceroy of Yunnan to survey this line in 1909.

Bhamo—Tengyueh (Tien-Mien) Railway (123 miles).—Preliminary surveys have been completed; the line will be of 2 ft. 6 in. or metre gauge.

SIAMESE ROYAL STATE RAILWAY.—The following excerpts from the report for 1909-10 are of interest:

Of all events during the year under report the most noteworthy were the inauguration of the sections Ban Dara-Utaradit-Pang Ton Phung and Ban Dara-Sawankaloke, as also the opening of the River Line, connecting Bangkok Terminus with the Menam river at Chong Non See.

LENGTH OF LINE.

The new sections:
Ban Dara-Utaradit.....28.2 Km.
Utaradit-Pang Ton Phung.....24.3 Km.
Ban Dara-Sawankaloke.....28.7 Km.
Totalling.....81.2 Km.

were opened for traffic on 15th August, 1909, bringing the total length open to 926 Km., i. e. 774.6 of standard gauge (1.435) and 151.4 of meter gauge 926 meters total.

Average length during the year is 895.7 (803.3), increase against previous year 11.50%, leaving only 19 Km. of standard gauge (Pang Ton Phung to Meh Puak) to be completed and probably opened to traffic during the year 1910.

The financial result of the working of the State Railways for the year 128 was a net gain to the state of Ticals 2,310,792 after meeting the working expenses and contribution to reno-

vation fund. The gross receipts were Tcs. 4,303,962, an increase of Tcs. 114,978. The working expenses were Tcs. 1,706,202, an increase of Tcs. 48,265.

Though the average length of the line shows an increase of 11.50%, the gross-receipts comparatively have an increase only of 2.74%, which falling off can mostly be accounted for the sparseness of population in the newly opened districts.

Decrease in the percentage of expenditure to gross receipts is chiefly due to reduction of rates for daily labor. Increases are accountable partly to falling off of traffic receipts and partly to increase of the staff.

Passengers.—There were decreases totalling 165,554 in the number of tickets sold on the Sections Bangkok to Ban Phaji, Ban Phaji to Korat, Bangkok to Petriu, and Bangkok Noi to Petchaburi. The decrease in receipts on these sections amounted to Tcs. 103,067. There were increases on all the other sections totalling 163,376 in the number of tickets sold, and Tcs. 131,545 in receipts.

The increases on sections Ban Phaji to Paknampoh, Paknampoh to Pitsanuloke and Pitsanuloke to Bandara are evidently the signs of gradual development of traffic, and with regard to the increases on sections Ban Dara to Utaradit, Utaradit to Pang Ton Phung, and Ban Dara to Sawankaloke, these lines were not opened to traffic in 127.

The falling off on sections Bangkok to Ban Phaji, Ban Phaji to Korat, and Bangkok Noi to Petchaburi is probably accountable to depression of trade and general conditions of the business in the year under report, while the remarkable decrease on the Petriu line, attributes partly to the reason of competitive struggle of motor-boat traffic, in the canals to the north of the line, tapping thickly populated districts.

Other Coaching Traffic.—Luggage brought in Tcs. 2,079 more than in 127, and special trains and sundries Tcs. 66,989 less. The difference in the last item is due to the extraordinary military movements in 127.

Goods and Live Stock.—There were carried by the railways last year 106,350 tons of Paddy (an increase of 33,999 tons), 47,792 tons of Stone, 17,571 tons of Timber, 15,726 tons of Merchandise, 4,614 tons of Firewood, 4,476 tons of Salt, 2,976 tons of Kerosine Oil, 2,293 tons of Fish, 1,990 tons of Hides and Horns, 1,802 tons of rice, 1,537 tons of Iron, 1,427 tons of cloth and clothes, 1,019 tons of Liquor, 1,002 tons of Lime, 468 tons of Stick Lac and Gam Benjamin, 818 tons of Cement, 342 tons of Cotton, 225 tons of Coins, etc., etc. Including 3,921 tons of railway construction goods the total was 250,471 tons, and the receipts Tcs. 1,326,010. In addition there were carried 715 heads of horses, 4,286 cattle and 106,844 pigs.

Comparing the results of goods traffic (without regard to railway construction goods) with those of the previous year, an increase of 54,466 tons with an increase in receipts of Ticals 24,0643 is to be noted. Whereas the increase in tons amounts to 28 per cent the increase in receipts shows only 22 per cent due to the reduction in rates, which were enforced on and after the 15th January, 1910. From the above percentage of increase, paddy alone takes 17 per cent from the quantity and 13 per cent from the receipts.

Also for the goods rates the basis of sliding scale has been adopted and the reduction varies between 10 to 20 and more per cent, not throughout, but according to seasonal and economical conditions of the country. The new rates bid fair to be a success so far that certain commodities are transported now in much larger quantity than formerly and the receipts in goods traffic since the introduction of the new rates (7 months since) have increased by 5½ per cent in spite of the reduction.

New Works.—During the year under report 748,855 Ticals were expended under this head. The River line was completed.

Extension, station yard Bangkok.—The new station hall near Hua Lampong bridge will be erected in year 129. New Workshop has already been in occupation affording extensive facilities all round. Vacuum Brakes have been installed on most of the carriages offering better security to traffic. Though not directly pertaining to this head, I may be allowed to mention that introduction of bogie carriages on long journeys on standard gauge lines has been looked upon as an improvement as they afford more comfortable traveling.

Riverline and Riverstation.—The steady increase of the goods traffic of the Korat and Northern lines made it advisable to provide in time for a new outlet of the traffic at Bangkok, the Klong Kutmai hardly affording sufficient place in the busy time of the year. It was therefore decided to provide for a new goods-station at the Menam Chow Phya some miles down the stream near Klong Thoy. A Royal Proclamation was issued on the 11th December 1905 granting to the Royal Railway Department the right of expropriating the land required for the construction of a branch line from Mackasan to the River and for a goods-station stretching along the river to an extent of 1100 m. and a width of 300 m. Works were commenced immediately after the Royal Proclamation having been issued and on the 15th February, 1910 the station was opened to traffic.

Expropriation.—The whole land expropriated with an area of 150806 square wahs was purchased for Tcs. 221,431 = Tcs. 1.46 per square wah. Special difficulty was met with in acquiring the land at riverside and lengthy arbitrations had to be gone through. An old Wat had to be shifted at an expense of 16,548 Tcs.

Earthwork.—The total of earthwork amounts to 67607 cbm for the branchline and 146106 cbm for the station = 214413 cbm in all at a cost of 164799 = Tcs. 0.76 per cbm. The earthwork includes the excavation of a klong on station ground of 1200 m. length 30 m. topwidth and 4.5 m. depth at high flood.

Bridges.—The branchline to the Riverstation is crossing 3 navigable klongs. Total cost of bridges amounts to 52040 Tcs.

Permanent way.—The permanent way is of the type of the Korat and Northern lines. Sleepers were cut in the Korat district and the ballast brought from the Railway quarries at Pak-Preo and Chongkeh. Including the Station-yard 10.2 km. tracks have been laid.

Stationyard.—Both the banks of the klong above referred to have been provided with double tracks. Besides a crane of 10 tons capacity and a landing for ordinary boats have been erected. The station-building together with office and quarters for the station-master and a shelter for customers has been constructed of Mai Teng Rang wood and covered with corrugated iron.

Extraordinary works.—At km. 3.7 the line is crossing the Paknam Railway. This necessitated preventive measures against collisions by establishing signal installation which was specially designed for this purpose. Besides the Paknam Railway had to be raised over 1 m. at this spot.

Total cost.—The total cost of the construction of the Riverline and Riverstation amounts to 614150 Tcs.

Prospects.—Though the traffic on the new station for the present is only slight it can hardly be doubted that in the course of time the station will play an important role in transshipment of goods between Railway and sea going vessels. For this reason the station-ground has been laid out to meet all future eventualities. This seemed the more advisable as the steady increase of landprices along the river would have made it at later times difficult if not prohibitive to extend the station.

The place has been chosen on the deep water side of the river to facilitate later on the construction of wharves for seavessels. On the other hand the strong current of the Menam on this side affects heavily the bank, which is being gradually washed away and costly protections of the bank have therefore to be faced in future.

Mr. Ker believes that in spite of all obstacles the program of railway building in China will be carried out.

EAST COAST RAILWAY OPENED.—The new section from Bahru Bahau to Triang River, covering a distance of 32 miles, was announced ready for opening the first of the month. This branch taps Pahang at Triang. It is expected that this line will reach Semantan by the Spring of next year.

SOUTH MANCHURIA RAILWAY.—This company has completed arrangements to increase its service to four trains weekly to and from Dairen to Changchun. It is also announced that the South Manchuria and the Kirin-Changchun line have arranged a working agreement at Kuanchangtze.

SUPPLY OF INDIAN RAILWAY MATERIAL.—According to *Railways*, Messrs. J. Brown and Company, Limited, Sheffield, have supplied a quantity of helical laminated and volute springs for rolling-stock to the Assam-Bengal Railway, and the Patent Foundry and Axlebox Company, Limited, axleboxes. Messrs. Brown Bayley's Steel Works, Limited, Sheffield, had an order from this Railway for the supply of steel tyres for wagon stock; and the Isca Foundry and Engineering Company, Limited, Newport, Monmouthshire, a large contract for the supply of points and crossings. Messrs. Taylor Brothers and Company, Limited, Sheffield, were manufacturing 20 steel axles and 10 steel tyres for locomotive engines for the East Indian Railway and Messrs. Cammell, Laird and Company, Limited, Victoria Street, London, Proprietors of the Cyclops Steel and Ironworks at Sheffield, have a large order in hand for the supply of helical and volute springs for rolling-stock. The Patent Axlebox and Foundry Company, Limited, have an order for the supply of 300 axleboxes to this Railway. The roofing materials ordered from England for the circular engine shed at the Madura junction station, South Indian Railway, is under supply by Messrs. Braithwaite and Kirk, Limited, Structural Engineers. A pillar water crane is under supply by Messrs. Blakeborough and Son, Limited, and a turntable for locomotive engines by the Horschay Company, Limited, for the same Railway. Messrs. J. Stone and Company, Limited, London, are supplying 26 of their dynamos and 26 switches for the electric lighting of passenger trains on the South India Railway together with 875 "Tonum" cells accumulators. The Wardle Engineering Company, Limited, also had an order from this railway for the supply of electric light materials; and Messrs. Siemens Brothers and Company's Dynamo Works, Ltd., Stafford and Woolwich, for electric lighting cables. The Vulcan Iron Works, Limited, Engineers, etc., Calcutta have the order of the East Indian Railway Company for the supply of the necessary steel and woodwork required for 14 spans of footpaths, each 65 feet 5 inches long, together with brackets, runners, plank, handrailings, etc. for the 60 feet span girder bridges which are under construction on the Hooghly Katwa Branch across the Saraswati, Kunti and Kharri rivers. Messrs. Burn and Company, Limited, Howrah have the order of the East Indian Railway for the supply of the galvanized iron and steel work required for the roofing over the first floor of the new Junior Hill School ("Oak Grove at Mussoorie; also for a portion of the ground floor, including trusses, purlins, gutters, wind ties, wire netting, etc. Messrs. Heatly and Gresham, Limited, had the order of the East Indian Railway for the supply of a steam self-propelling Crane with double chain, to lift 5 tons at a maximum radius of not less than 15 feet, which was urgently required by their Engineering Department. The Leeds Forge Company, Limited, England, are manufacturing and will shortly ship 75 broad-gauge steel wagons for the transport of Coal for the Bengal-Nagpur Railway. Messrs. Stable Ford and Company, Limited, are supplying ten goods brakevans for the same Railway 2 feet 6 inch gauge extensions and the Gloucester Railway Carriage and Wagon Company, Limited, 14 broad-gauge railway wagons. The Consolidated Brake and Engineering Company, Limited, London, E. C., have supplied 200 sets of vacuum brake gear for rolling stock to the Burma Railways. Messrs. Willford and Company, Limited, have an order from the same railway for the supply of 500 helical springs for rolling-stock. Messrs.

The British Insulated and Helsby Cables, Limited, Prescott, Lancashire, had a large contract for the supply of telegraph materials to this line. The Vulcan Foundry Company, Limited, locomotive manufacturers, have a large order in hand for the supply of "spares" or duplicate parts for locomotive engines to the East Indian Railway. Messrs. Taylor Brothers and Company, Limited, Sheffield, are supplying 60 steel tyres and 16 steel crank axles for locomotive engines to this Railway and Messrs. Owen and Dyson, Limited, 60 pairs of wheels and axles for vehicle stock and 200 spare wheel centres. Messrs. Greenwood and Battley, Leeds, are supplying the Loco and Carriage and Wagon Department of the South Indian Railway with a bolt and rivet forging machine. The Horsley Company, Limited, Tipton, Staffordshire, have the order of the East Indian Railway for the supply of 9 spans of steel girders for the Kiul bridge and 4 spans for the Hulluhur bridge, which are being renewed. Messrs. Gillanders, Arbuthnot and Company have an order for the supply of 2,000 tons of best selected Burma teak squares, first quality, to the North-Western State Railway. The Tees Side Bridge and Engineering Works, Limited, have the order of the East Indian Railway for the supply of the girders required for the second track over Tonse Bridge near Meja Road Station.

SINGAPORE GOVERNMENT RAILWAY.—The following excerpts are taken from the report of the Acting Manager and Chief Engineer, Mr. W. J. Haskins:

The result of the year's working shows an increase in the gross revenue of \$38,845.64, compared with the year 1908. There has been a steady increase in passenger traffic, 463,804 passengers being carried during the year, which is 26,382 more than during the year 1908.

2. The receipts on account of goods nearly doubled during the year.

3. The capital cost of the Railway up to 31st December, 1909, amounted to \$4,565,967.57. The net earnings for the year were \$68,144.14 equal to a dividend of 1.49 per cent.

4. The total revenue amounted to \$233,792.34.

5. The working expenses during the year amounted to \$165,648.20, as compared with \$174,512.26 during 1908.

6. In July, 1909, through traffic with the Johore State and Federated Malay States Railways was commenced and the total amount earned on this account by this Railway up to 31st December, 1909, was \$6,573.33.

7. *Waggon Ferry Johore Straits.*—This was opened to traffic on 24th December, 1909.

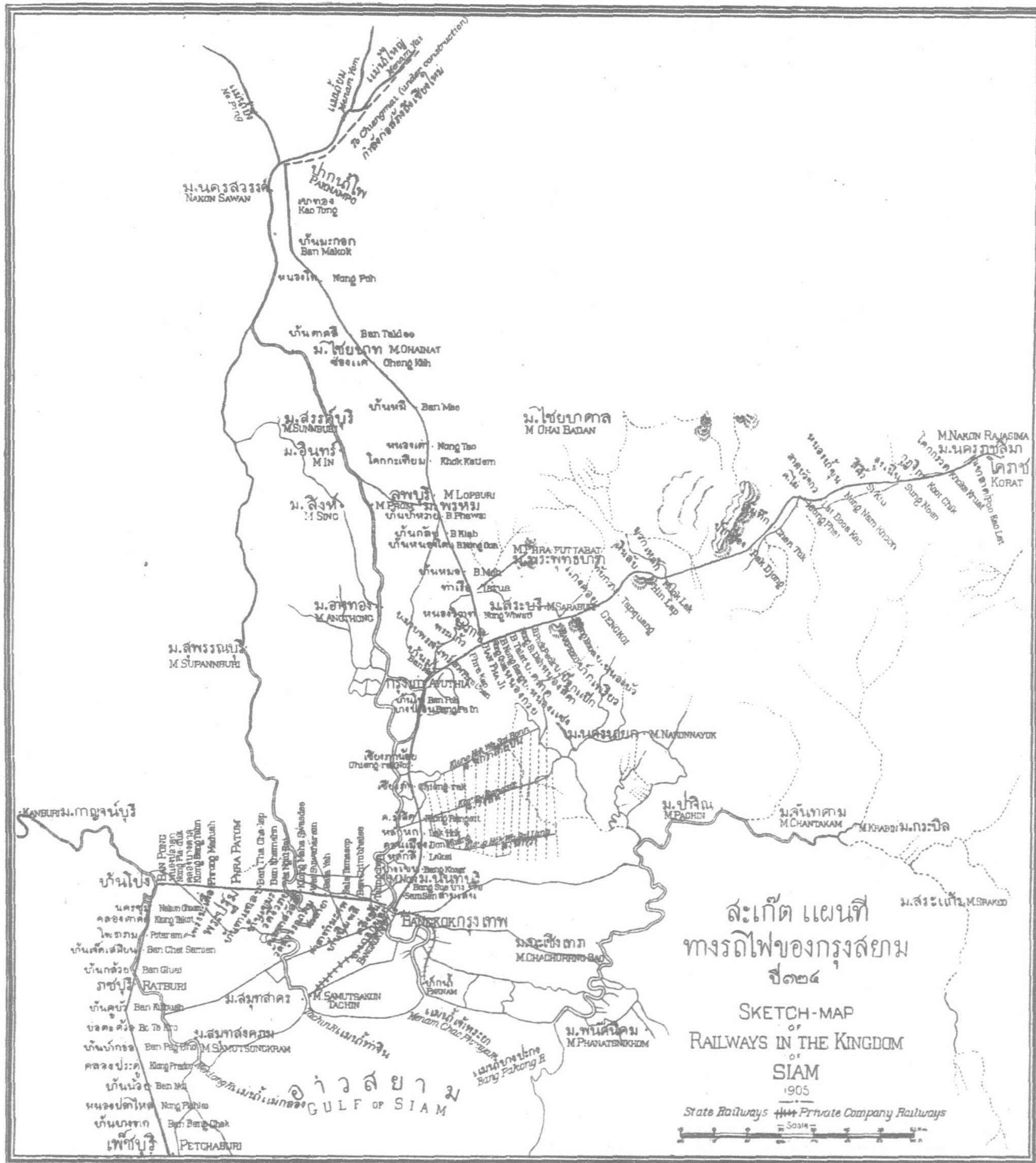
8. *Relaying.*—Six and three-quarter miles of permanent way were relaid with 80-lb. rails. Several low embankments were raised, nine level crossings and six girder bridges were also relaid.

9. The alignment between the 13th and 14th mile was corrected by straightening the road and so eliminating a short curve.

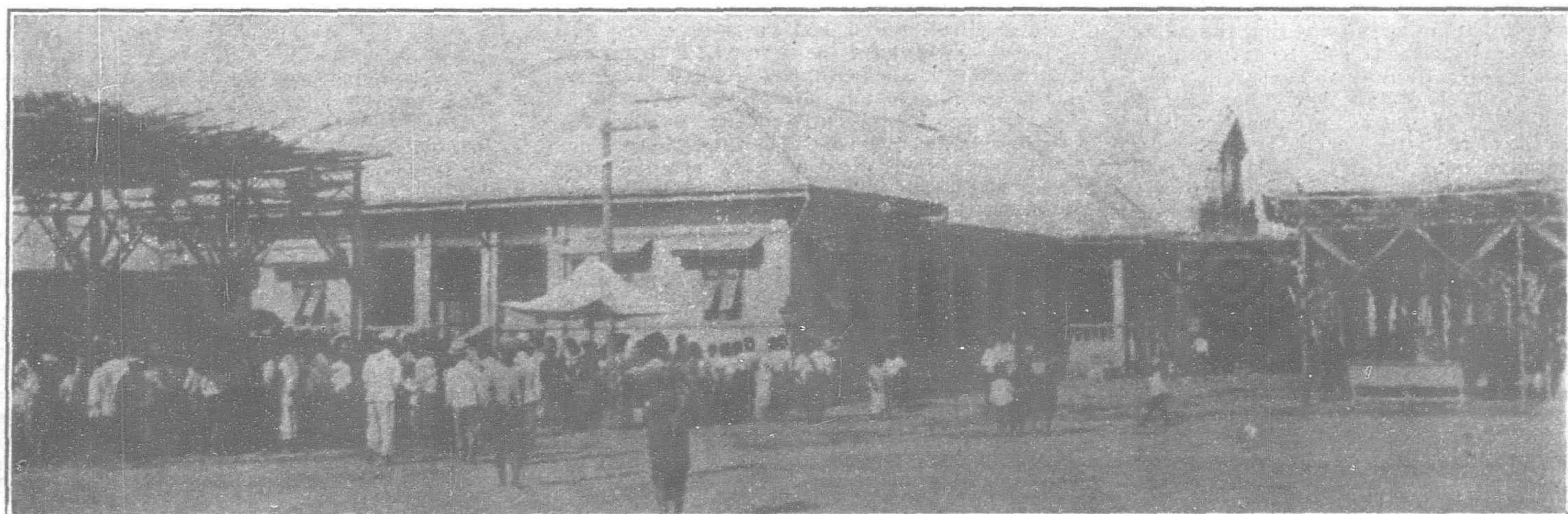
10. *Engine and Carriage Sheds.*—All the necessary brick work on the engine shed was completed, and the steel roof principals supplied by the Crown Agents were erected. Fuel stage and water column were also erected and foundations for the carriage shed completed.

FRENCH INDO-CHINE RAILWAYS.—The following is gathered from the report of the Minister for the Colonies:

The whole of the line from Laokai to Yunnan, a distance of nearly 300 miles, was opened to traffic quite recently. The Haiphong line, of which it is an extension, showed last year an increase of about £30,000 in receipts, as compared with the returns of the year before. In the case of the line from Saigon to Khanh Hon and Lang Bian, the section from kilometre 132 Phanrang will be opened on July 1, 1911, and the section from Phanrang to Nhatrang at the end of that year. The section from Phanrang to Xomgon will also be completed at the end of next year. The earning of this system, which will ultimately comprise about 250 miles of railways, showed an increase of nearly £3,000 last year. The returns from Hanoi, Ninh Binh and Vinh coastal line showed a decrease of nearly



RAILWAY MAP OF SIAM



NEW GOVERNMENT HEAD OFFICE (FRONT VIEW) PETRIEU, ROYAL STATE RAILWAYS

PHILIPPINE MINING NEWS

THE PARACALE CONSOLIDATED MINING CO.—The owners of approximately fifty placer and lode claims in the Mambulao and Paracale Districts have consolidated their interests and incorporated with a capital of ₱1,000,000 divided into 500,000 shares of ₱2 each. The owners receive 300,000 shares of the stock and have donated 100,000 shares from their holdings for promotion work. Of these 25,000 have been placed on the market at ₱.50 and have been largely subscribed.

Little is known of the lode properties as the work of development is only in the initial stages. Encouraging reports have been received from the placers, but the company is very conservative in its announcement.

Indeed, the main purpose of the consolidation is to make a thorough test of all the properties before proceeding to active development. The initial subscription of promotion stock at ₱.50 was most satisfactory and testing operations are already under way.

PERSONAL.—George I. Adams, formerly of the Philippine Mining Bureau, returned to Manila recently after concluding an examination of the Timor Oil Exploration Company.

General Manager Bridgeman, of the Philippine Exploration Company, is expected to return to the Philippines from New York by the end of the month.

Ex-Governor Whitmarsh of Baguio, one of the pioneer mining men of Benguet, sailed this month accompanied by his family to Europe.

Mr. M. A. Clarke, president of the Benguet Consolidated, also sailed this month for Europe.

THE MAJOR GROOP.—Development work on this property, situated in Benguet, preparatory to the installation of a three-stamp mill has been progressing rapidly.

₱10,000, owing to the floods. Work on the projected line from Mytho to Kantho has not yet been begun.

THE MINDANAO MILITARY RAILWAY.—With the appointment of General Wood to the post of Chief of Staff, interest in the Overton-Keithly line which has been mooted for years is revived, and there are prospects of an appropriation being secured next session of congress. General Wood while governor of the Moro province was strongly in favor of the enterprise and now that he is in a position to secure a better hearing it is expected that the matter will receive more attention. The survey of the line covering a distance of 24 miles was made some years ago and will cost approximately \$400,000. Besides serving to carry military stores and supplies economically this line would open up a large tract of fertile country.

TAOTAI JEME TIEN YU'S APPOINTMENT.—The most important news of the month is the acceptance by Taotai Jeme Tien Yu, the successful railway engineer who was responsible for the completion of the Peking-Kalgan line, of the position of Director General of the Canton-Hankow line. He will not proceed to this post until he has completed the plans for the construction of the proposed Szechuan-Tibet line. It appears that Taotai Jeme accepted the position only after he had been guaranteed that all the shares of the companies interested were paid up and the proceeds deposited in responsible banks; that he would have a free hand to direct the work and employ assistants and labor, and that he would not be subjected to any criticism until he had completed the line. It is understood that these terms were complied with. It is believed that this appointment solves all problems connected with this line. In some quarters it is intimated that his appointment will do away with the necessity of floating the proposed foreign loan.

THE CHEKIANG RAILWAY TROUBLE.—The dismissal of Director General Tang Shan-chien has served to create an unusual situation in which there is serious friction between the merchants and the Board of Communications. From

THE BENGUET CONSOLIDATED.—This company has been sadly crippled as a result of the serious storm in the mountain region which carried off its well equipped cyanide plant. The mill has been engaged in cleaning up the dump and the results have averaged from 80 to 100 ounces monthly. We have been informed, however, that arrangements have been made for the installation of a new cyanide plant to be completed in about six months.

THE PHILIPPINE EXPLORATION CO.—The San Mauricio mine began operating twenty stamps, September 7, and ran irregularly up to the end of the month, making 18 days full time. The result was 130 ounces of gold from the plates. Besides this, twenty tons of concentrates running in value from \$50 to \$80, U. S. C., per ton were shipped to the Tacoma Smelting Company. The mill has been running steadily during the month and it is expected that the output will average about 200 ounces with from 75 to 100 tons of concentrates monthly. Another shipment of 75 tons of concentrates will be made on November 12.

The Exploration Company has a prospecting party engaged in active operations on the Robinson group.

GOVERNMENT CEMENT FACTORY.—The Washington correspondent of the Manila *Cable News-American* states that the War Department is considering the installation of a large cement manufacturing plant in the Philippines. The Government imported 84,000 barrels of cement last year and it is believed that the investment would be warranted by a general saving in cost.

THE EAST BATAN COAL COMPANY.—This company has added two coal cutters to its equipment. They were installed early this month and will increase the output by 300 tons daily,

reports, it is the purpose of the Board to take over control of the railway. The latter part of September a meeting of the shareholders was held at which it was decided:

- (1) That Mr. Liu Cheng-lo be invited to be Director-General of the Chekiang Railway vice Mr. Tang Shau-chien.
- (2) That the shareholders be pressed to pay up the calls on their shares.
- (3) That the authorities be asked to announce whether or not they have abolished the people's right to elect directors of the companies under their management.

All efforts to secure the reinstatement of President Tang proved abortive and the general sentiment expressed by the shareholders denounced the Government for interfering in the management of the line. However, the Peking authorities have been firm. It is reported that the Provincial Assembly suspended its session for the reason that the governor refused to have the subject of again addressing the throne reopened.

JAPANESE RAILWAY CHIEF HONORED.—The Czar has conferred the Order of St. Anne upon Vice-President Hirai of the Japanese Railway Board.

THE CENTRAL RAILWAY LOAN.—Conflicting reports are received as to the progress made towards the consummation of this agreement, but it would appear that the conclusion of the agreement is as far away as ever. A dispatch from Peking, October 4th, was to the effect that the representatives of the four foreign Syndicates and the Yuch'uanpu have held a conference in regard to the Canton-Hankow Railway Loan. H. E. Sheng Kungpao, Vice-President of the Ministry of Posts and Communications, criticized the terms offered and would not agree to take up the loan, urging the promise to the gentry not to employ foreign capital.

Previously a Peking dispatch stated that the Acting President had advised the foreign representatives that the matter would not be taken up until President Tang Shou-yi's return. So far no new information is available.

each having a capacity of 150 tons of coal every 24 hours. They were secured from Messrs. Ingersoll Rand & Co. of New York City. Two additional machines are on the way.

HEADQUARTERS MINING CO.—This company expects to be in a position by March, 1911, to begin operations with its battery of ten stamps. The machinery and equipment, including a Ridgeway filter tube mill, etc., are now being installed. The development work is still progressing and by the date of the beginning of mill operation, sufficient ore will be in sight to keep the plant supplied continuously.

THE NUEVA ECIJA FIELD.—Active interest is reported in this region. The Cabu and the Rio Chica companies are busily engaged in prospecting and reports continue very favorable.

THE MANCAYAN COPPER.—The status of this property remains unchanged, but negotiations are being carried on with interested parties looking to further development.

THE BUA MINING CO.—The Secretary Treasurer's report for the six months ended June 30, 1910, shows a profit of \$13,512.15 after writing off ₱5,000 to a fund against overdraft. The mill did not resume operations after the storm of October, 1909, until January and owing to floods was closed down May. The result was 1,600 tons crushed, 1,237.04 ounces recovered by amalgamation, valued at ₱35,609.33; 578.41 ounces cyanide recovery valued at ₱10,566.80 making a total value of ₱46,176.13.

"Condition of Plant. All the milling machinery is in good working condition, the fluming however needs renewing. The cyanide plant and all its connections, with the exception of the sumps and zinc boxes destroyed in the typhoon, is in the best possible state of preservation. The gravity and aerial tramlines are in good condition and can be used in the construction of the new mill. When the mill was finally shut down, the cyanide plant and all machinery below the battery floor was dismantled and put high above any possible flood levels. Sheds were erected over the cyanide plant timbers to protect them from the weather.

"Mining. Operations were started on the 1st January, 1910, and continued till the 2nd May last when the heavy rains made it impossible to continue crushing profitably any longer. It was then considered advisable to shut down the mill pending the decision of the Directors as to the advisability of removing all machinery to a suitable mill site."

Mr. P. Weedon, the Company's acting Manager, reports in part as follows:

"Mining. On the 1st January work was resumed at the Gomok claim. No drifting on reefs has been carried on at the top levels as all work has been confined to stoping the North and South reefs on these levels. The average height stoped on the North reef is 45 feet. The average heights stoped on the South reef is 35 feet; and distance on each reef is 350 feet. The crosscut tunnel has been extended due South for a distance of 717 feet. This is the crosscut mentioned in the last report, the object of which was to cut the North and South reefs at a depth of 100 feet below the present working. At 515 feet from the mouth of the crosscut the North reef was cut, showing a body of ore 2½ feet wide and panning about \$8 free gold per ton. The reef at this point is considerably larger and carries better values than at the same vertical point above. This is a splendid indication that the reef is stronger and better as it dips into the more settled country. From the point where the crosscut met the North reef, a drive was put in on the ore in an easterly direction for a distance of 80 feet, and then the lower crosscut was connected by an upraise with the top workings. This upraise follows the ore body all the way and shows the height of ore between the two levels to be 110 feet. The crosscut tunnel is well timbered where necessary, but ground through which the upraise passes was considered sufficiently hard to stand without timber. This was the condition of the mine after the typhoon in May 1910, and all men were discharged. Since the completion of the upraise no work has been done in the mine."

FAR EASTERN ENGINEERING, CONSTRUCTION, COMMERCIAL AND FINANCIAL NEWS

ELECTRIC RAILWAYS, LIGHT, POWER, TELEGRAPHS, TELEPHONES, AIRSHIPS, AUTOMOBILES, ETC.

JAPAN PURCHASES WRIGHT AEROPLANES.—An agreement has been entered into between the Japanese Government and the German manufacturers of the Wright Machine for the purchase of aeroplanes for the Japanese Army and a commission of 36 Japanese officers are to be instructed in the art of flying by the German military aviator, Commander Engelhardt.

TRAMWAY TO JAPANESE HEALTH RESORT.—The Hanshin Electric Railway Company has revived the proposal to build a tramway to connect Kobe with Rokkusan, a distance of twelve miles. It is understood that a cable car service with electric power will be installed if present plans mature. The cost of installation is estimated at yen 5,000,000.

TELEPHONES IN MANCHURIA.—The *Manchuria Daily News*, reviewing the telephone exchanges in Manchuria, places the number of telephones operated by the Kwangtung government at 3,166 and which includes service in the cities of Dairen, Port Arthur, Liushutun, Chinchow, Tashihchiao, Liaoyang, Mukden, Tieling, Kungchuling, Changchun, Antung, Hsinmintun and Fushun. Of these Dairen heads the list with 1,040. Besides the above there are 300 phones operated by the Yingkow Hydro-Electricity Co. and 300 more by the South Manchuria Railway Company, besides those operated by the Penchihi Colliery.

KUALA LUMPUR ELECTRIC LIGHT.—With the expenditure of \$50,000 last year the capital investment in plant amounted to approximately \$1,000,000 from which a net revenue of only \$20,000 was derived or about 1.8% on capital.

THE SIAM ELECTRICITY COMPANY, LTD.—The net earnings for the half year amounted to Ticals 304,503, an increase of Ticals 100,000 over the corresponding term, 1909. During the year there was a marked reduction in expenditure due to modern improvements added to the equipment. A dividend of 6% was paid for the term absorbing Ticals 196,250 and the balance was carried forward.

THE HILLS RAILWAY.—Plans and estimates for the construction of this line have been prepared for the construction of a line up Penang Hill according to the Resident Councillor's report. The cost is placed at \$214,000 and with the sanction of the Secretary of State for the Colonies active operations will begin. It will be a cable line operated by electricity provided by the municipal station. The construction of this line will secure transportation to the cool hills where the residents will build their homes.

PENANG'S NEW MOTOR FIRE ENGINE.—The municipality recently tested out its new motor fire engine purchased from Messrs. Dennis Bros. It is capable of a speed of 35 miles an hour and is equipped with a centrifugal pump that can throw water to a height of 126 feet.

THE JAPANESE AIRSHIP.—The Yamada airship was tested out last month at Osaki. The machine was attached to a rope during the flights, but the ascent and descent were successfully accomplished.

AMERICAN ARMY DIRIGIBLES.—The American military authorities have decided to add the dirigible airship to the equipment of the Signal Corps. An aerial corps is proposed as an auxiliary to the Coast Artillery.

WIRELESS ON U. S. INTERISLAND TRANSPORTS.—As a result of the accident to the Warren in Southern Philippine waters, the federal authorities have decided to equip all the transports in this service with wireless.

MANILA AUTOMOBILE TRADE.—The official police registry of automobiles owned in Manila show 339 registered by livery stables and private owners and 17 by dealers as demonstrating cars. During the year there has been a large increase of American cars sold in the islands and prospect of greater activity next year. The different bureaus of the government are making purchases and their use has been found a measure of economy in the cost of transportation. An automobile association has been organized and one race meet held.

GAS PLANT FOR MANILA.—There are two bidders for a franchise to install a gas plant in Manila. One of the bidders represents German capital and has been in the field for some time. A site has been selected and approved. The other bidder is Mr. Henry M. Jones, a local capitalist and president of the American Hardware and Plumbing Company. The matter will be referred to the legislature.

BRITISH CONTRACT FOR GAS PLANT.—The Tokyo Gas Company has placed a contract with a Bedford firm for the installation of a plant to cost £150,000.

THE SIAMESE TRAMWAY COMPANY, LTD.—The gross receipts for the half year amounted to Ticals 208,410.08 and the expenditure including track rent interest, etc., amounted to Ticals 168,065.72 leaving a net profit of Ticals 40,344. Of this Ticals 25,000 were written off for depreciation and the balance carried forward.

THE CHINGKIANG ELECTRIC LIGHT COMPANY.—A private Chinese company with a capital of Tls. 300,000 was recently organized to install and operate an electric light plant in this city. Messrs. Arnhold, Karberg & Company who had the contract for the installation turned it over complete to the company last month. Commenting on this work, which was under the direction of Mr. Nettle, electrical engineer representing the firm, the correspondent of the *North China Daily News* says that it is one of the most complete and up-to-date plants to be found in the Yangtze valley and will remain for many years a splendid advertisement of the firm of Messrs. Arnhold, Karberg & Co.

THE FRENCH TRAMWAYS OF SHANGHAI.—The profit for the year amounted to £3,916 but no dividend was declared.

PHILIPPINE CABLES.—Iloilo is to be made the central relay station for the southern islands to be connected by a cable from Calibo in Capiz to Romblon and another to connect Camp Jossman with Pulpandan in Negros. These connections will place Iloilo in direct communication with Manila in the north and Malabang in the south.

TOKYO ELEVATED RAILWAY.—The prospect for the construction of the proposed system in Tokyo at an early date is not very bright. There is great opposition to the project by the people and even the promoters agree that it will be years before the plans may be carried out successfully. The proposed lines would run at right angles to each other, one connecting Shinagawa and Asakusa, along the sea coast, and the other connecting Shinjuku and Monjo. The ward assemblies declare against the project for the reason that it would injure the view,

obstruct the sunlight, create an unendurable dmi and expose the householders to loss of privacy and great danger, according to the *Japan Times*.

DAMAGE TO JAPANESE ELECTRIC WORKS BY FLOODS.—The Tokyo Electric Light Company was affected by a reduction of its working capacity by a reduction from 13,000 kilowatts to 9,000 daily owing to obstructions in the water supply of the power stations. The Takasaki Water Power Generating Company had its power station, water reservoir, condensing plant badly damaged while parts were washed away. The waterway was practically buried in earth and sand carried into it by the force of the flood. The Seimo Electric Company had its supply and power station utterly destroyed but will soon resume operation. The *Japan Times* directs attention to the values of the experience during the recent floods to new companies engaging in like enterprises and the necessity of constructing more substantial reservoirs.

ELECTRICAL ENTERPRISE IN KWANSAL.—The following companies have been organized since the first of the year, according to an Osaka report:

The Hankai Electric Railway Co. (capital, 3,000,000 yen); the Hiroshima Electric Railway Co. (capital 3,000,000 yen); the Nara Electric Railway Co. (capital 3,000,000 yen); Okinawa Sugar Manufacturing Co. (capital, 2,000,000 yen); the Kita Osaka Electric Railway Co. (capital, 2,000,000 yen); the Kyoto New Electric Light Co. (capital, 2,000,000 yen); the Raisei Electric Railway Co. (capital, 1,000,000 yen); and the Nara Gas Co. (capital, 500,000 yen); their total capital aggregating to 16,500,000 yen.

F. M. S. MOTOR SERVICE.—The F. M. S. Railways have suspended their motor service between Seremban and Kuala Pilah, an arrangement having been entered into with a Chinese contractor to provide the connections.

MANILA AIRSHIP.—A monoplane designed by Eugene Girard of the Mitchell-Brush Automobile Garage is now almost perfected and will be given a trial this month.

The machine is a combination of the Bleriot and Demoiselle of Santos Dumont. Its engines are 36 horse power, with four cylinders. The propeller is made of native wood and measures 2.10 meters in full length, and will make 1,400 revolutions a minute. The tail consists of three different parts and are all kept moving continuously when the machine is in action.

The body and tail of the machine are made of guijo, very flexible and resistant and the total length of the apparatus is a trifle more than ten meters. Its weight when complete with one average man will be 375 kilos.

The wings of the machine are over four meters long, are made of a double cover of canvass and sustained by piano steel wires made tight by the use of aluminum turned buckles.

PUBLIC WORKS, DOCKS, WHARVES, BUILDINGS, ETC.

THE PANAMA FORTIFICATIONS.—The estimates submitted for the completion of the defenses for the canal before 1915, involve an outlay of \$14,000,000. Of this it has been recommended that \$4,000,000 be made immediately available. The items included in the above estimate follow:

Purchase and reclamation of sites.....	\$1,125,000
Emplacements.....	6,027,000
Guns and carriages.....	2,324,000
Ammunition.....	1,328,288
Power plants.....	138,000
Searchlights.....	244,800
Fire control.....	370,755
Submarine mine defenses.....	658,360
Barracks and quarters.....	1,834,000
Total.....	114,104,202

THE LUNETA EXTENSION PLANS COMPLETED.—The Municipal Board of Manila has approved plans for the improvement of the new made ground reclaimed by the city on which the Army and Navy and the Elks Clubs and the New Hotel are being built. The plans include parking, etc.

FINAL PAYMENT ON WATER SUPPLY CONTRACT.—The Manila Municipal Board has authorized the payment of ₱80,445 in full to Messrs. Matson, Lord and Belser Company for work done by the company on construction of the dam.

SINGAPORE SEWAGE SYSTEM.—A system of sewage for the city of Singapore has been recommended by Mr. Taylor for adoption by the Municipality, which will involve an outlay of £538,000 and an annual expenditure for maintenance of £10,000. The plans are most complete and would provide ample facilities for carrying off all the sewage of the city and place it in a satisfactory sanitary condition. The following are the items of cost as submitted:

Main outfall sewer	£ 85,000
Branch sewers as shown on plan....	70,000
Further branch sewers that may be found necessary.....	20,000
Syphons under Kalang and Singapore rivers.....	7,000
Ventilation.....	5,000
Flushing tanks.....	2,000
Intercepting pits.....	6,000
No. 6 night soil depots.....	24,000
Engine house, foundations, boiler economisers, engines, pumps, and screening and dredging plant....	40,000
Pumping mains.....	87,000
Outfall works.....	128,000
Effluent outfall to sea, including piling.....	15,000
	489,000
Contingencies, 10 per cent, say.....	49,000
	£ 538,000

BUILDINGS IN CANTON.—Vice-Consul General Myers makes the following report on construction work in this city:

"On Shameen, during 1909, a municipal bath house was constructed at a cost of approximately \$8,160. A "go-down" and junior staff quarters for the Hongkong Shanghai Banking Corporation, and a building for the Chartered Bank of India, China, and Australia are under construction. The examination shed and quarters for the outdoor staff of the Imperial Maritime Customs, situated opposite Shameen, at Honam, was completed last year. The bund from Tai-sha-tau to Shameen was also pushed forward and practically finished. Many new buildings, semiforeign, were erected along the bund during this time. At Tai-sha-tau the imposing railway terminus for the Canton-Kowloon Railway was completed. At Tungshan residences and railway buildings for the use of the staff, and also several schools and residences for American missionaries have been constructed. During the year the new dormitory building of the Canton Christian College was completed at a cost of about \$14,300.

"About one-half mile outside the east gate is the legislative building of the provincial assembly. This building was so far completed as to permit of the assembly sitting during the latter part of its session in November."

MANILA'S NEW WATER MAINS.—The Atlantic Gulf and Pacific Company made a record in the laying of water mains, completing the contract eighteen months previous to the time required in their contract. In all there were twenty-two miles of pipe laid varying from four to forty-five inches in diameter.

F. M. S. PUBLIC WORKS.—The total expenditure under this head for the year 1909 amounted to \$6,750,000, about \$2,000,000 less than the estimates. During the year 83 miles of metaled roads were added throughout the

states and 75 miles of bridle paths. The total mileage of road at the present time aggregate 1,874 of metaled roads and 1,477 miles of bridle paths. The Krian irrigation scheme involved an expenditure of \$30,000.

YOKKAICHI HARBOR IMPROVEMENTS.—An appropriation of yen 2,500,000 has been made to develop this important harbor. A retaining wall 400 feet in length is to be built and the basin deepened from 22 to 28 feet. A channel about 120 yards wide and 28 feet deep is also contemplated.

NEWCASTLE'S PORT IMPROVEMENTS.—The following is the report of Consul Killmaster:

"Good progress is being made generally in the improvement of the port. During 1909, 4,750 tons of bowlders were removed by dredges at the entrance, and it is thought that in the course of a few months the navigation department, which is now sounding the actual depth available in the channel, will find a passage of navigable width to carry no less than 23 feet of water at low-water spring tide. The clearing away of these bowlders is no doubt of immense importance and opens up possibilities of obtaining a deep port with small expenditure, compared with what would have been required had solid rock existed, as was first thought. On the inner crossing a depth of 32 feet has been tested without finding solid rock, and on the other crossing a depth of 26 feet.

"During the past year the expediency of extending the northern breakwater to the harbor entrance was considered by the Government, and after public inquiry the committee on public works reported in favor of extending both northern and southern breakwaters a distance of 420 feet, at a cost of \$450,000. However, parliamentary effect could be given to only that part of the committee's recommendation as to the northern breakwater, and an enabling act to carry out this work at a cost of \$175,000 was passed in December, 1909. Work has been commenced, and so far 3,500 tons of stones have been deposited. With the completion of this extension it is anticipated that a channel depth of 25 feet at low-water spring tide will easily be maintained."

TOKYO BAY CANAL.—The *Tokyo Asahi* reports that a plan is on the tapis to launch a large company with a capital of 15,000,000 yen with the purpose to construct a canal across Tokyo Bay, says the *Japan Times*. According to its plan, the canal is to be constructed between Haneda and Shibaura. It is to be 200 ken broad and 30 ft. deep, so that big vessels of 10,000 tons or more can directly proceed to Tokyo from the Pacific and anchor close to the metropolis. Besides the construction of the canal the new company will reclaim an area of about 6,000,000 tsubo along the canal, with the sand got by the excavations at Haneda point and by the dredging off Omori and Shinagawa. On a part of the reclaimed ground a railway line will be laid and many godowns constructed, while the remaining part will be let or sold. Fixing the business term of the company for ninety-nine years the company will collect tonnage dues at the rate of 10 sen per ton from vessels passing through the canal and on the expiry of the term the canal will be handed over to the Government. As soon as quarter, viz., 3,750,000 yen, of the entire capital is paid up the company will start work, resorting to loans or the issue of debentures for construction funds.

HARBOR AT SOURABAYA.—The improvements to this harbor will cost approximately florins 14,000,000 and will be completed in five years.

NEW BRIDGE OVER THE PASIG.—The plans for the new railway bridge over the lower Pasig in Manila are well under way. It will cost about ₱1,250,000 which will be borne by the Manila Electric Railway, the City of Manila and the Manila Railway Company. This bridge is to serve as the connecting link between the new port and the business section and the railways will occupy it with their track extensions.

PUBLIC AQUARIUM FOR MANILA.—The Insular Architect is preparing plans for the construction of an aquarium containing 24 plate glass tanks and some large tanks to be located at the gates to the Old City Walls. A collection of large fish, sharks and crocodiles are to be included in the collection.

STRAITS SETTLEMENTS PUBLIC WORKS.—Special reference was made in the report for 1909 to the development of the work on the new docks and wharves at Singapore and Penang.

The progress of the lagoon dock and main wharf reconstruction, Tanjong Pagar, by Messrs. John Aird and Co., has not been all that had been anticipated with such experienced contractors. In the lagoon dock some difficulty has been met with in sinking the foundations for the end walls of the dock, due to the nature of the strata met with in the trenches, but negotiations are proceeding between the engineers and the contractors with a view to coping with the difficulty in question. The chairman of the Tanjong Pagar Dock Board is now in London in connection with these negotiations. I regret that I am not yet in a position to give full information on the subject but hope to be able to do so shortly. The first completed length of 500 feet of the concrete block work wall of the main wharf reconstruction was handed over to the board on March 5, and operations on the next 700 feet of cylinder construction wharf have been pushed forward satisfactorily. The daily average number of men employed on the works has until latterly, been 3,000, and the value of work executed to date is £340,000. It is satisfactory to note that progress on the new graving dock, Keppel harbour, a most important addition to the facilities of the Port, has proceeded uninterruptedly, and that the works are in full swing both by day and night, with every prospect of their due completion well within the contract time. The daily average number of men employed on these works is 1,000 and the value of work executed to date is about £76,000. The Telok Ayer reclamation is proceeding satisfactorily. The extensions to Swettenham pier, Penang, have progressed rapidly. The northern extension of 345 feet is completed and the southern extension of 255 feet will be half completed by the end of the year. When these extensions are finished the pier will be 1,200 feet long with water frontage 30 feet deep at low tide.

HARBOR OF HAKODATE.—Hakodate's harbour facilities will be greatly increased when the scheme forming part of the "15 Years Programme" shall have been carried out. A breakwater will be extended to 3,300 shaku, which will expand the inner harbour to 3,600,000 yards. This is chiefly against the North-west wind. Another project is two embankments, to keep out the sand, to be erected on the other side of the harbour with a distance between them of some 17,000 shaku. These undertakings are begun this year and to be extended over 8 years. The total expense is 1,669,734 yen.

Again Hakodate boasts of a private dockyard—the Hakodate Dock Company—at the reclaimed ground at this city's west end. It covers over 25,800 tsubo, and has accommodation for ships of 10,000 tons.—*Japan Times*.

SHIPBUILDING, MERCHANT MARINE, FISHERIES, ETC.

NEW STEAMERS FOR THE MITSUI BUSSAN.—Five coal steamers have been ordered from a British shipyard and they are expected completed early next spring. Two of the new vessels will have a carrying capacity of 8,200 tons, dead weight; two, a capacity of 3,000 tons and one which may be converted into a general cargo steamer with a capacity of 5,000 tons. They are all to be of the cantilever type, the water ballast being placed on either side of the deck with concave surface of the tanks facing the cargo.

The two large steamers which are to be known as the Kingasan and Tenpaisan Maru are to be fitted with 10 wenchers, 12 derricks and five hatches 36ft. by 31ft. Their steaming capacity will be 10½ knots when fully loaded and 11½ knots in ballast. The two smaller steamers are to be known as the Rokkasan Maru and Takaosan Maru and are to be fitted with 9 wenchers and 8 derricks and are to have four hatches 28 by 18½ feet. These steamers will have a speed of 10½ knots when loaded and 10½ knots when steaming in ballast.

JAPANESE DREADNOUGHT LAUNCHED.—The Kawachi has been launched at Yokosuka. This battleship was laid down in January, 1909. Her tonnage will be 20,850 with a speed of 20.5 knots. Her dimensions are: length 480 feet; beam, 85 feet. She draws 28 feet. Curtiss turbines will be installed and she will have four screws. She will have six turrets, and two pole masts. Her armament will consist of a main battery of twelve 12-inch a secondary battery of ten 6-inch, and twelve 4.7 inch and five submerged torpedo tubes will be added.

JAPANESE FISH DEPOTS.—Consul Diechmann writes that the Japanese government is interested in the establishment of modern fish depots at Nagasaki and Shimonoseki for the benefit of the steam trawlers. A cold-storage plant would be an essential part of the scheme, and the fish could be sent to all points in the interior of Japan having rail connection, and would vastly increase the market for the fish.

The whaling industry is also one of increasing importance. The Toyo Hoge Kaisha is a combination of several whaling companies and owns 36 of the 40 vessels licensed by the Japanese Government to engage in whaling. The total number of whales caught by this company during 1909 was 605, which had an estimated value of \$1,500 each. The port of Moji is the supply and shipping point for a large number of the whalers.

VESSEL FOR U. S. NAVY.—The s. s. Banaag was launched from the Kowloon Docks last month. This vessel was ordered by the American Government for service at Olongapo Naval Station. It is 160 feet in length with 16 foot beam and designed to develop a speed of nine knots. She is equipped with triple expansion engines of modern type. A large horizontal tube boiler is installed.

AUSTRALIAN STEAMSHIP SERVICE.—The *Daily Consular Reports* contain the following from Acting Consular Agent at Townsville:

"The Dutch line of steamers (Koninklijke Pakevaart Maatschappij) between Batavia and Australia is still maintained. The line now has three vessels running monthly, the principal imports being spices, gum, and kapok. Batavia is establishing another outlet for Australian live stock, and already several shipments of horses have gone forward.

"The subsidized monthly service from London via Torres Straits inaugurated by the Queensland government is proving a boon, and every advantage is being taken of the service by merchants. These vessels berth at the Jetty Wharf and land their cargo there. Under the vigorous immigration policy adopted by the Queensland government large numbers of immigrants come forward by these vessels monthly.

"Trade relations with the Philippines are principally maintained by three British lines and one Japanese, frozen meat and live stock being the principal exports. The China Navigation Company (Limited) has contracted for carrying regular monthly shipments of horses and ponies to Manila. It may, perhaps, be advantageous for an American shipping line to consider the advisability of inaugurating a service between Australia and the Philippines and the East generally to cater for this business, which is sure to increase."

THE CHINA MERCHANTS STEAM NAVIGATION Co.—The shareholders of this company have presented another petition to the Government asking that the sole management of the com-

pany left to the merchants interested. They claim that Government control is expensive and inconvenient.

THREE JAPANESE SUBMARINES.—A Kure report is to the effect that the naval authorities are constructing three modern submarines at a special workshop in the Kure arsenal.

A NEW ZEALAND SUBSIDY.—The Government of New Zealand has decided to subsidize the N. A. mail line to San Francisco and to otherwise encourage shipping so as to secure her share of the Pacific trade.

T. Y. K. REDUCES RATES.—This company has reduced its passenger rates from Yokohama to Seattle to Yen 250 first class and yen 134 second class.

OIL BURNING DESTROYER FOR U. S. NAVY. The trial tests of this new vessel show an average of 32.8 knots.

JAPANESE SUBSIDIZED STEAMERS.—The following is a list given by the *Japan Mail* of the steamers and lines now enjoying the benefit of the provisions of the Japanese Deep Sea Navigation Subsidy Law:

Lines.	Subsidy.	Companies.
	yen.	
Antwerp (European) line	3,183,000	N. Y. K.
San Francisco line.....	2,051,000	T. K. K.
Seattle line.....	387,700	N. Y. K.
Tacoma line.....	821,800	O. S. K.
South American line.....	405,600	T. K. K.
Australian line.....	425,700	N. Y. K.

On the European line are employed eleven steamers, namely, *Tango Maru*, *Hitachi Maru*, *Iyo Maru*, *Kaga Maru*, *Aki Maru*, *Kamo Maru*, *Mishima Maru*, *Atsuta Maru*, *Miyazaki Maru*, *Kitano Maru* and *Hirano Maru*, and the last named six steamers being all the newly built 8,600 tons steamers. On the San Francisco line are employed the *Chiyo Maru*, *Tenyo Maru* and *Nippon Maru*; on the Seattle line the *Awa Maru*, *Tamba Maru* and *Inaba Maru* and on the Tacoma line the *Tacoma Maru*, *Seattle Maru*, *Panama Maru* and *Chicago Maru*, all of them newly built, 6,000 ton steamers. On this line will be placed the two new steamers the *Mexico Maru* and *Canada Maru* from next year.

SHANGHAI SHIPBUILDING.—The tug Kathryn built to the order of the Kochien Towboat and Transportation Company made an average speed of 9.58 at her trials last month and was formally turned over to her owners. The dimensions of this vessel are:

Length, 70 feet; breadth, 14 feet; depth, 8 feet. Her engines are of the compound condensing type with cylinders 11 in. and 22 in. with 12 in. stroke. Marine type boilers, with return tubes 7 ft. 10 in. in diameter and 8 ft. in length working at 120 lbs. pressure to the square inch, are installed.

ZAFIRO AND RUBI CHANGE FLAGS NOVEMBER 7.—The transfer of the steamers Zafiro and Rubi of the China and Manila Steamship Co. to the Philippines coastwise service, which necessitated their transfer from the British to the American flag, has been arranged. With the transfer an American master and crew will take charge. It is understood that Captain Crosby of the Interisland Transport Service is to command the Rubi and Captain Rice, the Zafiro.

TOYO KISEN KAISHA EXPANSION.—In carrying out its contract with the Western Pacific, this company proposes adding two vessels, making five vessels covering this connection. The *America Maru* is to be refitted for the purpose and a new turbine driven steamer, a sister ship of the *Chiyo* and *Tenyo*, now under construction at the Mitsu Bishi Dockyards at Nagasaki, will be added when completed. The five steamers will be in operation on this line by January next year.

The *Mexican Herald* states that with the withdrawal of the Kosmos Line from the Pacific coast trade between Salina Cruz and South and Central American ports, Toyo Kisen Kaisha

Line will be left alone in the trade. In view of this fact, that line will increase its capacity to five steamers of large tonnage beginning October 6. It is probable that the sixth vessel will be added to the service before the end of the year.

The *Kiyo Maru*, 17,000 tons, will arrive at Salina Cruz October 6, the first steamer on the new schedule. She will be followed at intervals of twenty-five days by the *Manchu Maru*, 8,200 tons; *Hong Kong Maru*, 11,000 tons; *America Maru*, 11,000 tons, and *Buyo Maru*, 11,000 tons.

About four months will be occupied in the round trip over the route from Hongkong, China, to Kobe and Yokohama, Japan; Honolulu, Hawaii; Manzanillo, and Salina Cruz, Mexico; Callao, Peru; and Iquique and Valparaiso, Chile.

The new service will reduce the time between South American ports and London from four months to two months, and the time between Salina Cruz, Mexico, and Callao, Peru, will be cut down from thirty to eight days.

This new service will be inaugurated to handle the increased business which will result when the Komos Line abandons the port of Salina Cruz. It will handle the traffic from the Orient to Mexico and South America, which will result from the recent traffic agreement entered into by the Western Pacific Railway Company and the Toyo Kisen Kaisha Line. The cargo from San Francisco to Mexico and South America will be handled by way of Honolulu on the vessels of the Toyo Kisen Kaisha Line steamers which ply between San Francisco and the Orient. This cargo will be transferred at Honolulu to steamers in the southern trade.

MINES, MINERALS, THE METAL TRADE, MACHINERY, ETC.

THE BRUSEH TIN MINING COMPANY.—The report for the year shows a profit of \$5,710.38. No dividend was declared. This company is becoming interested in rubber.

BURMA OIL COMBINE.—The Burma Oil Company is to have a formidable rival in the form of a combination of the Rangoon Oil Co., Ltd., with an authorized capital of R2,000,000, and an issued capital of R1,194,760, last dividend 55 per cent., and latest quotation on its R10 shares, R55; the Rangoon Refinery Co., Ltd., with R1,500,000 capital fully issued, no dividend, but its R15 shares standing at R18; and the Aungban Oil Co., Ltd., with an authorized capital of R3,500,000, issued capital R2,550,000, no dividend, its R15 shares standing at R13½.

RAHMAN HYDRAULIC TIN COMPANY.—The report for the year shows that after writing off \$16,213.40 for depreciation, shows a profit of \$67,658.70. Interim dividends absorbed \$31,869 leaving a balance of \$35,797.70 which was dealt with as follows: Final dividend \$15,930.50, bonus mine staff \$1,300, general reserve \$10,000, forward \$8,567.20. A final dividend of 5% was declared making 15% for the year.

THE PAULO LAUT COAL MINING COMPANY.—The output of this company for the year 1909 amounted to 119,000 tons compared with 98,000 for 1908. Over 160 vessels bunkered at Stagon, the port of the company in British Dutch East Borneo during 1909.

MANUFACTURING PLANTS FOR JAPAN.—The Japanese press claims that the recent tariff is having the effect of inducing foreign manufacturers to establish themselves in Japan and point to the proposal of Messrs. Babcock & Wilcox to establish a boiler manufacturing plant. It is understood that the Mitsu Bishi and Mitsu banks have been in communication with several large foreign manufacturers looking to the encouragement of this scheme.

THE COWIE HARBOR COAL COMPANY, LTD.—The *London and China Express* in reviewing the proceedings of the annual meeting stated that the chairman expressed the hope that

over 200 tons daily would be the output during this year and that the company had proved up 20,000,000 tons on their holdings.

THE PEKING SYNDICATE.—With the return of the force of colliers after the local harvests, the output of these mines is represented by 1,200 tons of coal daily. The output for July reached 23,000 tons and sales 17,500 tons.

KRUPPS MAY INVADE CHINA.—A London report is to the effect that in view of the large ordnance orders soon to be placed by the Chinese Government and the increased activity in this line of development in the Far East, the firm of Krupps is endeavoring to secure a site for the establishment of a plant in China.

THE EASTERN SMELTING COMPANY.—The report for the half year shows larger and more satisfactory returns than ever the previous corresponding term. A dividend of 4% was declared and \$20,000 carried forward.

NEW DREDGER FOR THE TONGKAH COMPOUND TIN DREDGING COMPANY.—An order has been placed by this company in Australia for a tin dredger designed to work at a depth of the 35 feet below water level, the dimensions of the hull to be 120 feet in length, 40 foot beam and a depth of 7.5 feet. The price named is £18,000. The dredge will be utilized on the company's concession, Tongkah Harbor, Siam.

F. M. S. TIN EXPORT.—The Mines office has issued a statement of the exports for the first eight months of the year as follows:

The figures for Perak, Selangor and Negri Sembilan respectively are as follows:—

Tin. Pikuls.	Tin Ore. Pikuls.	Total. Pikuls.	Duty. \$ c.
66,304.44	218,853.71	285,158.15	2,742,916.47
28,621.33	134,495.41	163,116.74	1,598,097.33
85.87	23,809.98	23,895.85	234,148.08

The figures for the corresponding period of 1909 were:—

Tin. Pikuls.	Tin Ore. Pikuls.	Total. Pikuls.	Duty. \$ c.
71,535.17	223,611.78	295,146.95	2,548,210.59
30,095.54	143,316.66	173,412.20	1,499,743.07
4,264.83	27,458.00	31,722.83	273,208.72

BELAT TIN MINING COMPANY, LTD.—At a recent meeting of this company a dividend of 20% was declared making 30% for the year.

GOLD AND TIN IN KELANTAN.—The report for 1909 states that the Duff Development Company worked four dredges in the Galas River and won 8,507 ounces during the year. Another dredge is now working on the Nenggiri River where the company has a concession covering seven miles of the river. The output tin for the year amounted in all to 69 piculs.

OIL WAR IN SINGAPORE.—A war in the price of oil was inaugurated between the Standard Oil and the Asiatic Petroleum Company upon the conclusion of their agreement a month ago. There has been a drop of 40% in the price and the latest advices from Singapore are to the effect that Standard Arrow brand was quoted at \$1.00 Straits Cur. a case of eight gallons while the Asiatic Dragon was quoted at the same price. These brands were formerly quoted at \$1.70 and 1.53 respectively.

NEW TIN MINING SYNDICATE.—The formation of a company to exploit tin lands near Batu is proposed as a result of the tests made by the Kepong Syndicate, Ltd., on over 30 acres of tin bearing land. The capital of the company is reported to be £150,000. The total area involved is 227 acres.

HANGYANG IRON WORKS SECURES LARGE RAIL CONTRACT.—The contract for the supply of 6,000 tons of steel rails to the Northern Section of the Tientsin-Pukow Railway has been

secured by the Hangyang Iron Works. The price is reported to be Tls. 50 a ton.

NEW ALLOY DISCOVERED.—Messrs. Vickers, Sons and Maxim have placed a new alloy on the market known as Duralumin which is reported to be slightly heavier than aluminum and as strong as steel. The new metal may be rolled, stamped, extended or forged at suitable temperatures.

MINING IN INDO-CHINA.—A bulletin issued by the Governor General directs attention to the undeveloped mineral wealth of the country and urges greater activity in developing the coal measures of Hongay. The zinc mines of Trang-da, Lang-Hit and the Thang-Moi produced 40,000 tons of zinc last year and lead and copper deposits have been uncovered at Caobang.

F. M. S. TIN RETURNS FOR AUGUST.—The returns show a total output of 13,741 piculs.

THE RAUB AUSTRALIAN GOLD MINING CO., LTD.—For the four weeks ended August 13, 3,993 tons of ore were crushed and 802.23 oz. of gold recovered.

FINANCIAL, COMMERCIAL AND MISCELLANEOUS NEWS

THE NETHERLANDS INDIA BUDGET.—The total estimates for 1911 show a total revenue of florins 212,588,075 as against an expenditure of florins 230,738,102.

PRODUCTS OF JAVA.—The annual report of the Java Bank contains some interesting figures concerning the principal agricultural products of Java. The production of sugar, for instance, has been very favorable during 1909, as 180 factories produced 20,208,000 piculs (Javan picul=136 pounds), which is about 140,000 piculs more than in 1908. This quantity changed hands at an average price of 6.60 florins (florin=40½ cents) for Muscovados. The Deli tobacco crop yielded 271,350 bales, being about 1,000 bales less than a year ago. The average price per half kilo (1½ pounds) was 1.10 florins, against 0.91 of a florin, and the total value of the crop has been fixed at 46,600,000 florins, or nearly 8,000,000 florins more. The crop of Java tobacco was disappointing, 506,013 bales being exported, or a decrease of 110,000 bales. The proceeds were only 25,740,000 florins, against 32,400,000 florins in 1908. The cultivation of tea is also constantly advancing, so that in 1909 20,176,376 kilos were exported from Java against 15,979,269 kilos in 1908. This culture will be still more largely extended, foreign capitalists also being interested. Of copra, 129,089 tons, at a value of 25,600,000 florins, have been shipped from Netherlands East India.

CHINA'S BUDGET.—The estimates prepared by the Ministry of Finance include a total expenditure of Tls. 333,502,300 while the revenue is estimated at Tls. 297,501,700, a deficit of Tls. 36,006,600.

CHINESE BONDS.—A Reuter dispatch from London is to the effect that Chinese bonds for the amount of £450,000 being 7% interest were issued in London on the 26th. On Saturday last they were quoted at a premium of from £1 to £2; the present quotation is £108. The amount is to be appropriated for the redemption of the Peking-Hankow railway bonds.

PHILIPPINE SUGAR.—The reports from Panay and Negros are to the effect that production for 1910-11 will reach 2,096,000 piculs, an increase over last year of about 48 per cent.

MANILA REVENUE.—During the first quarter of the fiscal year ended September 30th the total collections from all sources amounted

to P442,050.35, an increase of P15,112 over the returns for the corresponding quarter last year.

GOLD YEN NOTES FOR MANCHURIA.—The *Manchuria Daily News* states that yen 1,000,000 of newly issued yen 5 gold notes were received last month by the Dairen Branch of the Yokohama Specie Bank in exchange for the old notes.

WILD COCOON SILK REELING STATION AT ANTUNG.—It is proposed by several Japanese capitalists to incorporate a company with a capital of yen 500,000 for the purpose of operating 100 reels at this point in view of the quantity of wild cocoons available in that region.

SOME RUBBER DIVIDENDS.—The *Malay Mail*, commenting on enviable dividend-producing companies, says:

"The Tremelby dividend announced today brings another F. M. S. rubber company into the list of dividend-paying concerns. This Company has an authorized capital of £75,000, and an issued capital of £52,552, consisting of 46,552 fully-paid £1 shares and 12,000 £1 shares issued last year and now ten shillings paid. The Company's estates, comprising 2,186 acres in all, are Tremelby, Ebor, and Sungei Nebong. There are 1,545 acres planted, including 1,002 acres over 2½ years old, 249 acres over 3½ years old and 108 acres over 5½ years old. There are, approximately, 228,370 trees. The crop for the year ended June 30th was 22,118 lb., and, as the output for July and August alone is more than half this total, it is evident that this year's crop will very largely exceed last year's. The prospects of the Company appear very bright.

"The Cicely Company is one of the lowest capitalised concerns in the country—£16,000—and its dividend record makes a pretty picture. It has declared the following dividends to date:

	Prof.	Ord
1905-6.....	10	5
1906-7.....	20	15
1907-8.....	42½	37½
1908-9.....	55	50
1909-10.....	140	135
1910-11.....	51½	50 (int.)
	318½	292½

"It would appear from the amount of the interim dividend on the preference shares that the directors contemplate paying further dividends for the current financial year of 153½ on the preference and 150 on the ordinary shares

SIBERIA COLONIZING SCHEME.—It is estimated that the Russian Government will expend Roubles 2,500,000 in encouraging emigration to Siberia this year. Over 13,000,000 acres are to be surveyed into 40 acre plots and each adult is entitled to acquire one plot. Besides money will be advanced to aid the colonists and it is estimated that over 500,000 persons will be transported to the new territory.

PHILIPPINE SUGAR BONDS PROPOSED.—Governor General Forbes has recommended that the legislature provide a fund for the purchase of bonds issued by sugar companies composed of hacienda owners, the capital to be utilized in installing sugar centrals in the Philippine sugar districts

HONGKONG-MANILA PARCEL POST.—The Hon C. B. Elliott, Secretary of Commerce and Police, and the Postmaster General of Hongkong recently concluded negotiations for the opening of a direct parcel post service between the two cities. The maximum size of parcels will be 3 feet 6 in. in length and the maximum weight 11 pounds, including all classes of merchandise. The rate will be 35 centavos per pound or fraction. An extra sum of ten centavos in Manila and 15 centavos in Hongkong will be charged for delivery to street address. Conventions of a similar nature are proposed with other colonies and the islands and direct money order exchange is being considered.

FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, September 30, 1910.

STOCK.	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	AT WORKING ACCOUNT	DATE	LAST DIVIDEND.	Approximate Yield per cent per annum (Pre-sent Quotation)	CLOSING QUOTATIONS
BANKS.											
Hongkong & Shanghai Banking Corporation	1865	\$15,000,000	120,000	\$125	\$125	{ g £1,500,000 s £16,000,000 i £250,000 c £4,099 \$400,000	\$2,029,390	31-6-10	{£2. for first half year ending 30-6-10, @ ex 19½ = \$22.456}	5%	{ \$927½ sales £87
National Bank of China, Ltd.	1891	£699,475	10) 99,925	£7	£6	{ c £400,000	\$34,167	31-12-09	\$2 (London 3½) for 1903.	---	\$78 buyers
MARINE INSURANCES.											
Canton Insurance Office, Ltd.	1881	\$2,500,000	10,000	\$250	\$50	{ i \$1,560,000 u \$254,583 s \$302,799 o £125,000 Tls. 225,000 u Tls. 335,253 f Tls. 146,586 s \$3,000,000 g £90,000 f \$287,984 i \$1,449,735 u \$713,985	Nil.	31-12-08	\$10 for 1908.	5½%	\$190 buyers
North China Insurance Co., Ltd.	1903	£150,000	10,000	£15	£5	{ Tls. 225,000 u Tls. 335,253 f Tls. 146,586 s \$3,000,000 g £90,000 f \$287,984 i \$1,449,735 u \$713,985	Tls. 206,573	30-6-09	Final of 7½ making 15½ for 1908.	5%	Tls. 115
Union Ins. Society of Canton, Ltd.	1867	\$3,100,000	12,400	\$250	\$100	{ g £90,000 f \$287,984 i \$1,449,735 u \$713,985 s \$3,000,000 g £90,000 f \$287,984 i \$1,449,735 u \$713,985	2,552,545	31-12-09	{Final of \$20 per share, making in all \$50 per share for 1908, and an int. div. of \$30 per share for 1909.	6%	\$825 sales
Yangtze Ins. Association, Ltd.	1889	\$1,200,000	12,000	\$100	\$60	{ i \$1,000,000 j \$371,802 \$169,861	\$797,602	31-12-09	{ \$12 for year ending 31-12-08 and interim of \$3 on account of 1909.	7	\$200
FIRE INSURANCES.											
China Fire Ins. Co., Ltd.	1870	\$2,000,000	20,000	\$100	\$20	{ z \$1,000,000 f \$550,348 \$61,168	\$438,406	31-12-09	\$6 and bonus \$2 for 1908.	7%	\$115 sellers
Hongkong Fire Ins. Co., Ltd.	1868	\$2,000,000	8,000	\$250	\$50	{ f \$1,460,000	\$426,218	31-12-09	\$27 for 1908.	8%	\$355 buyers
SHIPPING.											
China & Manila Steamship Co., Ltd.	1882	\$750,000	1) 30,000	\$25	\$25	{ i \$57,734	Dr. \$3,777	31-12-09	\$4% for 1906.	---	\$10 buyers
Douglas Steamship Co., Ltd.	1883	\$1,000,000	20,000	\$50	\$50	{ i \$230,000 s \$100,589 o \$250,000 d. i. \$630,000 f \$130,545 \$ 1 106	Nil.	30-6-10	\$2½ for year ending 30-6-1908.	---	\$23 sellers
Hongkong, Canton & Macao Steamboat Co., Ltd.	1865	\$1,200,000	80,000	\$15	\$15	{ d. i. \$630,000 f \$130,545 \$ 1 106	\$18,026	30-6-10	{Dividend of \$1½ for half year ending 30.6.1910.	8%	\$32 sellers
Indo-China Steam Navigation Co., Ltd. (Preferred)	1882	£600,000	(2) 60,000	£5	£5	{ i £148,891	£15,162	31-12-08	No dividend paid for last two yrs.	---	\$58 sales
Do. Do. (Deferred)			(2) 60,000								
"Shell" Transport & Trading Co., Ltd.	1898	£ 2,000,000	2,000,000	-£1	£1	{ i £120,000 £1,000,000	£205,868	31-12-09	{Final div. of 2½ per share (coupon 14) making in all 4½ per share for 1909, and an int. div. of 1s. per share on % for 1910.	5%	{ 83½ buyers £11 buyers
"Star" Ferry Co., Ltd.	1898 1900	\$200,000	10,000 10,000	\$10 \$10	\$10 \$5	{ i \$6,500 \$55,830	\$1,159	30-4-10	{A dividend of 7% for year ending 30.4.1910 and bonus of 5% making 12%.	{ 5% 6%	{ \$23 sellers \$10
REFINERIES.											
China Sugar Refining Co., Ltd.	1878	\$2,000,000	20,000	\$100	\$100	{ e \$520,000 r \$83,620	Dr. \$8,090	31-12-09	\$5 for half year ending 30-6-1910.	6%	\$150 sellers
Luzon Sugar Refining Co., Ltd.	1882	\$700,000	7,000	\$100	\$100	{ none	Dr. \$101,851	31-12-09	\$3 for 1897.	---	\$20 sellers
MINING.											
Chinese Engineering & Mining Co., Ltd.	1901	£1,000,000	1,000,000	£1	£1	{ d £215,000 h £12,289	....	...	Interim of 1½ for 1910 (coupon 14)	9%	Tls. 15 sellers
Headwaters Mining Co.	1908	P600,000	28) 600,000	P10	P10			...	First year.		P10 buyers
Raub Australian Gold Mining Co., Ltd.	1892	£200,000	150,000 50,000	£1 £1	18-10 £1	{ £4,873	Dr. ....	...	1½2 per share, 13th div.	5%	\$7½ sellers
Oriental Consolidated Mining Co., Ltd.	...	\$5,000,000	500,000	\$10	\$10	{ none	....	...	{Final of gold \$0.65 for 1909 in all g \$1.15.	...	30½ buyers
DOCKS, WHARVES AND GODOWNS.											
Fenwick (Geo.), & Co., Ltd.	1889	\$450,000	18,000	\$25	\$25	{ \$25,275	Dr. \$8,460	31-12-09	\$1½ for year ending 31-12-06.	---	\$9 sellers
Hongkong & Kowloon Wharf & Godown Co., Ltd.	1888	\$3,000,000	60,000	\$50	\$50	{ i \$550,000 s \$31,993 o \$40,000 i \$88,214 v \$221,000	\$4,848	31-12-09	\$2½ for 1909.	4½%	\$54 buyers
Hongkong & Whampoa Dock Co., Ltd.	1866	\$2,500,000	50,000	\$50	\$50	{ Tls. 1,000,000	\$148,940	30-6-10	3% for half year ended 30-6-1909	...	\$50 sellers
Shanghai Dock & Engin'g Co., Ltd.	1906	Tls. 5,570,000	13) 55,700	Tls. 100	Tls. 100	{ Tls. 697,257 r Tls. 50,000 e Tls. 125,000	....	...	{Final of Tls. 3½ making Tls. 6 in all for year 30-4-1910.	8%	Tls. 75 sellers
Shanghai & Hongkew Wharf Co., Ltd.	1902	Tls. 3,600,000	36,000	Tls. 100	Tls. 100	{ Tls. 125,000	....	...	Interim of Tls. 3 for 1910.	7	Tls. 110 sellers
LANDS, HOTELS AND BUILDINGS.											
Anglo-French Land Investment Co., Ltd.	1906	Tls. 2,500,000	3) 25,000	Tls. 100	Tls. 100	{ Tls. 35,000	Tls. 4,314	29-2-09	Tls. 6 for year ending 29-2-10	5½	Tls. 97 sales
Central Stores, Ltd.	---	\$751,845	16) 50,123	\$15	\$15	{ n. \$1,000	\$1,000	31-12-08	8% for 1909	---	\$12½ sellers
Hongkong Hotel Co., Ltd.	1866	\$600,000 \$400,000	12,000 8,000	\$50 \$50	\$50 \$25	{ r \$648,975 \$20,000	\$21,477	30-6-10	{ \$3 on old shares, \$150 on new shares, for half year ending 30-6-10.	5½%	{ \$100 \$75
Hongkong Land Investment & Agency Co., Ltd.	1889	\$5,000,000	50,000	\$100	\$100	{ e \$250,000	\$27,971	31-12-09	Interim of 3½ for 1910.	7%	\$101 sales
Humphreys' Estate & Finance Co., Ltd.	1887	\$1,500,000	150,000	\$10	\$10	{ i \$226,945 20) \$25,856	\$5,471	31-12-09	45 cents for 1909.	5½%	\$7½ sellers
Kowloon Land & Bldg. Co., Ltd.	1889	\$300,000	6,000	\$50	\$30	{ none	\$269	31-12-09	\$2½ for 1909.	8%	\$32 buyers
Shanghai Land Investment Co., Ltd.	1888	Tls. 3,900,000	78,000	Tls. 50	Tls. 50	{ Tls. 1,523,045 e Tls. 300,000	Tls. 63,969	31-12-09	Interim of Tls. 3 for 1910.	6½	Tls. 112
West Point Bldg. Co., Ltd.	1889	\$625,000	12,500	\$50	\$50	{ none	\$1,958	31-10-09	Interim of \$1.80 for 1910.	8½	\$39
COTTON MILLS.											
Ewo Cotton Spinning & Weaving Co., Ltd.	1895	Tls. 1,000,000	5) 20,000	Tls. 50	Tls. 50	{ Tls. 250,000	Tls. 10,991	31-10-09	Tls. 11 for year ended 31-10-09.	8½	
Hongkong Cotton Spinning, Weaving & Dyeing Co., Ltd.	1901	\$1,250,000	125,000	\$10	\$10	{ e 20,000	\$26,297	30-7-09	50 cents for year ending 31-7-08.	---	\$3½ buyers

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCK.	WHEN ESTABLISHED	CAPITAL.	NO. OF SHARES.	VALUE.	PAID UP.	RESERVE	AT WORKING ACCOUNT.	DATE.	LAST DIVIDEND.	Approximate Yield per cent. per annum at present Quotation.	CLOSING QUOTATIONS
International Cotton Manufacturing Co., Ltd.	1895	Tls. 750,000	6) 10,000	Tls. 75	Tls. 75	Tls. 175,000	Tls. 8,372	30-9-09	Tls. 7½ for year end. 30-9-09 (10%)	10%	Tls. 47½ buyers
Laon-kung-mow Cotton Spinning & Weaving Co., Ltd.	1895	Tls. 800,000	8,000	Tls. 100	Tls. 100	none	Tls. 4,829	31-12-08	Tls. 6 for 1909	10%	Tls. 50 buyers
Soy Chee Cotton Spinning Co., Ltd.	1895	Tls. 1,000,000	2,000	Tls. 500	Tls. 500	Tls. 31,173	Tls. 31,173		Tls. 35 for 1909	17%	Tls. 200 buyers
MISCELLANEOUS											
Bell's Asbestos Eastern Agency, Ltd.	1895	£5,377.10s.	11) 8,604	12½	12½	£1,500	£797	31-12-09	15% for 1909		\$8 sellers
China-Borneo Co., Ltd.	1903	\$720,000	8) 60,000	\$12	\$12	\$40,000	Nil.	31-12-08	5% for 1909	6½	\$9
China Light & Power Co., Ltd.	1901	\$300,000	50,000	\$5	\$5	none	\$50,242	31-7-10	60 cents for year ending 28-2-06		\$1.40 sellers
China do. do. Special Shares	1907		17) 50,000	\$1	\$1						
China Provident Loan & Mortgage Co., Ltd.	1898	\$1,250,000	7) 125,000	\$10	\$10	\$80,000	\$2,602	31-12-09	80 cents for 1909	10%	\$8 buyers
Dairy Farm Co., Ltd.	1896	\$300,000	40,000	\$7½	\$6	\$10,000	\$1,850	31-7-09	\$1.20 for year ending 31-7-09	6½%	\$19
Green Island Cement Co., Ltd.	1897	\$4,000,000	400,000	\$10	\$10	\$14,000	\$4,290	31-12-09	Interim of 15 cts. per share for 1910	15	\$4.65 buyers
H. Price & Co., Ltd.	1907	\$120,000	19) 15,000	\$10	\$10	none	\$1,923.87	31-12-09	14% viz \$1.40 for 1909	12%	\$12
Hongkong Electric Co., Ltd.	1889	\$600,000	60,000	\$10	\$10	none	\$11,798	28-2-10	A dividend of \$1.20 per share and a bonus of 10 cts. per share for year end. 28-2-10.	6½	\$21
Hongkong Ice Co., Ltd.	1881	\$125,000	5,000	\$25	\$25	\$150,000	\$12,662	31-12-09	Interim of \$2 per share for 1910	6	\$135
Hongkong Rope Manufacturing Co., Ltd.	1883	\$600,000	\$60,000	\$10	\$10	\$40,000	\$9,176	31-12-09	Final of \$1 per share making in all \$2 for 1909	9	\$21 sellers
Maatschappij tot Mijn-, Bosch- en Landbouwexploitatie in Langkat	1902	Gs. 2,500,000	25,000	Glds. 100	Glds. 100	21 Tls 547,500 Tls. 547,500 Tls. 63,914	Tls. 316,682	31-12-08	Interim Div. of Tls. 12½ 15 March Tls. 12½ 15 June & Tls. 15 15 Sept.	5	Tls. 1200
Peak Tramways Co., Ltd. (New)	1907	\$750,000	25,000	\$10	\$10	\$20,000	\$3,014	30-4-10	80 cents on fully paid shares & 8 cents on \$1 paid shares for year ending 30-4-10	5½	\$13 sellers
Philippine Co., Ltd.	1904	\$750,000	75,000	\$10	\$10	none	Ps. 2,875	31-12-09	None		\$8 sellers
Robinson Piano Co., Ltd.	1900	\$200,000	22) 4,000	\$50	\$50	\$5,000	\$61,138	31-8-08	6% for ½ year ending 30.9.07		\$50 sellers
Shanghai-Sumatra Tobacco Co., Ltd.	1902	Tls. 600,000	9) 30,000	Tls. 20	Tls. 20	Tls. 24,820 w Tls. 100,000	Tls. 5,250	31-10-08	No dividend this year	2	Tls. 140 sellers
South China Morning Post, Ltd.	1903	\$150,000	6,000	\$25	\$25	none	\$31,096	31-8-09	None		\$25 sellers
Steam Laundry Co., Ltd.	1902	\$100,000	20,000	\$5	\$5	none	\$127,86	31-5-10	50 cents for year ending 30-5-10	8	\$5½ sellers
Union Waterboat Co., Ltd.	1905	\$500,000	15) 50,000	\$10	\$10	\$11,956		31-12-08	60 cents for year-end. 31-12-1908	6½	\$8
United Asbestos Oriental Agency, Ltd.	1896	\$100,000	10,000	\$10	\$4	\$46,000	\$471	31-5-10	15% per ordinary share for year ended 31-5-10	5	\$11½ sellers
Watkins, Ltd.	1899	\$100,000	10,000	\$10	\$10	none	\$1,941	31-12-09	3½ for 1909		\$3 sellers
Watson (A. S.) & Co., Ltd.	1886	\$900,000	90,000	\$10	\$10	\$300,000 e) \$25,000	\$1,776	31-12-09	3% for 1909		\$6½ buyers
Weismann Limited	1904	\$30,000	3,000	\$10	\$10	\$12,250	\$67	31-7-09	10 per cent for year endg. 31.7.08.	10%	\$12 buyers
William Powell, Ltd.	1901	\$105,000	15,000	\$7	\$7	none	\$782	30-6-09	Final of 30 cents making 80 cents for year ending June 30th 1906		\$2 buyers
Societe des Pulpes et Papeteries du Tonkin		660,000	13,200	50 Haiphong	25 Currency				First year		\$30 (Hk. Cy.) sel.
RUBBERS											
Allagar Rubber Estates, Ltd.	1909	£85,000	29) 750,000	2½	2½						4½
Anglo-Malay Rubber Co., Ltd.	1905	£150,000	1,500,000	2½	2½						23½
Balgownie Rubber Estate, Ltd.	1905	\$200,000	11) 20,000	\$1	\$1	\$7,400	\$11,205	31-3-09	80% for year ending 31.12.09		\$12 [Singapore]
Castlefield Rub. Ltd. [fully pd.]	1906	\$35,000	27) 32,650	\$1	\$1	none			6d per share		105½
Damansara (Selangor) Rub. Co.	1906	£110,000	25) 110,000	£1	£1	nil.	£2,220	31-12-08	50% for 1909		137½
Golconda Malay Rubber Co.	1907	£80,000	26) 80,000	£1	£1	nil.	nil.		25% for 1909		110½
Highland & Lnd. Para R. Co.											
Do. Do. [fully paid]	1906	£310,000	181,454	£1	£1	\$8,784			35% for 1909		101½
Do. Do. [partly paid]			123,546	£1	15½						
Kamuning (Perak) Rb. & Tin Co.			950,000	2½	1½	nil.	nil.				5½ prem.
do do A Shares	1909	£200,000	105,000	£1	£1						
do do B Shares			180,000	£1	£1	\$4,000	1,82		30% for 1909		150½
Kuala Lumpur Rubber Co., Ltd.	1906	£180,000	180,000	£1	£1				Interim of 1½		45½
Linggi Plantations, Ltd. (ord.)	1895	£100,000	10,000	£1	£1						
Do. Do. (7% pref.)	Reconst		10,000	£1	£1						
Ledbury Rubber Estates Ltd.	1908	£125,000	60,000	£1	£1				17½% for 1909		72½
Do. Do. (contrib.)			40,000	£1	7½				25% for 1909		270½
Sagga Rubber Co. Ltd.	1903	£20,000	2,000	£1	£1	nil.	nil.		50% interim		\$31
Sandycroft Rubber Co.	1904	\$100,000	50,000	\$2	\$2	\$20,000	\$1,275	31.1.08			12½ prem.
Sekong Rubber Co., Ltd.	1908	\$80,000	80,000	£1	12½	nil.	£836	31.12.08	7½% for 1909		84½
Shelford Rubber State Ltd.	1906	£65,000	65,000	£1	£1	nil.	nil.		25% interim		\$14
Singapore & Johore Rb. Co., Ltd.	1903	\$250,000	2,500	\$2	\$2	nil.	nil.				90½
Sungei Choh. Rb. State Co., Ltd.	1907	£45,000	45,000	£1	£1	nil.	nil.				12½
Sungei Kapar Rubber Co.	1906	£110,000	23) 110,000	£1	£1	nil.	£3,448	31.12.08	37½% for 1909		2½ prem.
Toerangie Rubber Co.	1910	30) £100,000	51,000	£1	7½				First year		

LOANS AND DEBENTURES.	AGENTS FOR THE LOAN.	AMOUNT OF LOAN.	PAR VALUE.	OUTSTANDING BONDS.	WHEN PAYABLE.	CLOSING QUOTATIONS.
China Government, 7 per cent. Silver Loan 1886 E.	Hongkong & Shanghai Banking Corporation.	Tls. 767,200	Tls. 250	1914	Mar. 31st and Sept. 30th each year until Mar. 31st, 1917	par.
Hongkong Hotel Company, Ltd., 6 per cent. Mortgage Debentures of 1899		\$750,000	\$500	\$ all	Half yearly, June 30th and December 31st	par
Shanghai & Hongkew Wharf Company, Ltd., 6 per cent. Debentures of 1902		Tls. 543,900	Tls. 100		Half yearly, June 30th and December 31st	Tls. 103½
Astor House Hotel Company, Ltd., 8 per cent. Debentures of 1903		Tls. 500,000	Tls. 100		Half yearly, January 1st and July 1st	102½
Chinese Engineering & Mining Co., Ltd., 6 per cent. Debentures of 1903		£500,000	£	£431,960	Half yearly, June 30th and December 31st	par.
International Cotton Manufacturing Co., Ltd. 7% Debentures of 1901	Russo Chinese Bank	Tls. 500,000	Tls. 100	||	Half yearly, March 31st and Sept. 30th	Tls. 97½

a Authorized capital \$2,000,000.
b Building Reserve Account.
c Capital Reserve Fund.
d Depreciation Fund.
e Equalization of Dividend Fund.
f Exchange and Investment Fluctuation Account.
g Gold Reserve Fund.
h Exchange and Reserve Account.
i Insurance Fund.
j Reinsurance Fund.
k Contingencies Account.
l Legal Reserve Fund.
m Authorized Capital.
n Sinking Fund.
o Raw Sugar Reserve Account.
p Premium on New Issue.
q Boiler Repairs and Renewals Account.
r Repairs and Renewals Account.
s Silver Reserve Fund.

t Depreciation and Repair Account.
u Underwriting Suspense Account.
v Special account.
w Special Works Fund.
x Extra Reserve Fund.
y 72,560 owned by the Company.
z 7,200 shares unissued.
1 4,000 shares unissued.
2 First issue of 60,000, of which 10,411 unallotted.
3 5,000 shares unissued.
4 4,480 shares unissued.
5 5,000 shares unallotted.
6 1,616 shares unallotted.
7 75,000 shares unissued.
8 14,000 shares unissued.
9 17,000 shares unissued.
10 40,453 shares actually issued.
11 7,688 shares actually issued.
12 4,200 shares unissued.

13 500 shares unissued.
14 399 shares unissued.
15 22,277 shares unissued.
16 10,000 shares unissued.
17 Special shares are entitled to half of the profits.
18 Capital contributed by Chinese Government-Kuping Tls. 5,000,000.
19 12,000 issued only.
20 Typhoon and Floods Insurance Fund.
21 Special Cash Reserve.
22 1000 shares unissued.
23 10,000 shares unissued.
24 4595 part paid shares.
25 7,500 shares unissued.
26 10,000 shares unissued.
27 2,350 shares unissued.
28 25,000 shares unissued.
29 10,000 shares unissued.

30) 3,700 fully paid vendor shares and an option of 5,000 shares at par for 5 years granted to option holders.
*Based on last year's dividend.
** Based on present dividend.
\$ 216 held by the Company.
|| Only Tls. 134,000 taken up.
¶ In certificates of £20 and £100.
† Redeemable in 10 years, or at option of Comp., the Company giving 6 months notice.
‡ Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 95.
*** Redeemable at par on 30th June, 1915.
Dr. Deficit.
†† Singapore dollars.
‡‡ 4,880 shares unissued.
× 16,756 shares unissued.
§§ 25,000 shares unissued.
4140 shares unissued.

ADDITIONAL SHANGHAI SHARE QUOTATIONS

September 28, 1910

STOCK	CLOSING QUOTATIONS	HIGHEST AND LOWEST PRICES DURING THE WEEK	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	LAST DIVIDEND	WHEN PAID
Oriental Consolidated Mining Co., Ltd.	35 1/10		G. \$5,000,000	500,000	G. \$10	G. \$10	none	Interim of Gold 50 for 1910.	June 10, 1910
Vulcan Iron Works, Limited.	Tls. 40		Tls. 500,000	1,000	Tls. 500	Tls. 500	—	Tls. 50 for year ended 31.3.06.	Nov. 1, 1906
Yangtze Wharf & Godown Co. Limited.	Tls. 207		Tls. 250,000	2,500	Tls. 100	Tls. 100	Tls. 50,000	Tls. 15 for 1909.	April 1, 1910
Wei-hai-wei Land & Building Co., Limited.	Tls. 9 nominal		Tls. 91,850	3,674	Tls. 25	Tls. 25	—	Interim of \$2.00 for 1909.	Aug. 8, 1909
Anglo-German Brewing Co., Limited.	\$85 buyers		\$100,000	4,000	\$100	\$100	none	5% for 1909.	Mar. 12, 1910
Butler Tile Works, Limited.	Tls. 25		Tls. 60,000	1,200	Tls. 50	Tls. 50	—	Tls. 3 for year ending 31.3.09.	June 8, 1909
Major Bros., Limited.	Tls. 55		Tls. 300,000	6,000	Tls. 50	Tls. 50	—	First year.	—
Oriental Ice Company, Limited.	Tls. 20		Tls. 130,000	2,600	Tls. 50	Tls. 50	—	First year.	—
Scharffs Oil and Bone Mills Ltd.	Tls. 40		Tls. 200,000	4,000	Tls. 50	Tls. 50	—	3% for 1907.	Mar. 14, 1908
Shanghai Ice Company, Limited.	Tls. 12		Tls. 200,000	8,000	Tls. 25	Tls. 25	—	\$3 for 1905.	Apr. 2, 1906
Campbell, Moore & Co., Limited.	\$10		\$12,000	1,200	\$10	\$10	\$9,000	\$5 year ending 28.2.08.	Apr. 15, 1908
Dunning & Company, Limited.	\$35 sellers		\$100,000	2,000	\$50	\$50	—	7.20 for 1909.	May 1, 1910
J. Llewellyn & Co., Limited.	\$60 nominal		\$7,000	1,200	\$60	\$60	—	Final of 3% making 6% for 1908.	June 8, 1909
Lane, Crawford & Company	\$50		\$250,000	2,500	\$100	\$100	—	\$2 for year ended March 31, 1909.	June 18, 1909
S. Moutrie & Company, Limited.	\$40		\$250,000	5,000	\$50	\$50	—	Final of 6% making 10% for 1909.	June 1, 1910
Weeks & Company, Limited.	\$23		\$400,000	20,000	\$20	\$20	\$40,000	First year.	—
Dominion Rubber Co., Limited.	Tls. 62 1/2		Tls. 225,000	22,500	Tls. 10	Tls. 4	—	16% for 1908.	Nov. 9, 1909
Kalumpang Rubber Co., Ltd.	Tls. 700		Tls. 700,000	14,000	Tls. 50	Tls. 50	** Tls. 11,844.48	—	—
Sennawang Rubber Estates Company, Limited.	Tls. 1550		Tls. 250,000	2,500	Tls. 100	Tls. 100	—	Final of 6% making 16% year 1909.	June 22, 1910
Tebong Rubber and Tapioca Estate, Limited.	Tls. 48		Tls. £76,000	76,000	Tls. £1	Tls. £1	—	Tls. 3 for 1907.	June 28, 1909
Shanghai Mercury, Limited.	Tls. 50 buyers		Tls. 105,500	2,100	Tls. 50	Tls. 50	—	5 p. c. for 1909.	May 1, 1910
Shanghai Mutual Telephone Co., Limited.	Tls. 67 1/2 buyers		Tls. 675,000	13,500	Tls. 50	Tls. 50	—	7% 1908.	Apr. 18, 1909
China Export, Import & Lumber Company, Limited.	Tls. 75		Tls. 350,000	500	Tls. 100	Tls. 50	—	{ 10% = yen 2 1/2 for year ending 30th Sept. 08 Y. 1.20 for year ended Feb. 29.	Apr. 26, 1909
China Printing Co., Limited.	Tls.		Tls. 750,000	1,500	Tls. 50	Tls. 50	—	\$6 for 1907.	Apr. 22, 1908
Hirano Mineral Water Co., Ltd.	Y. 10		Y. 125,000	5,000	Y. 25	Y. 25	—	8% for year ended Feb. 28, 09.	June 21, 1909
E. E. Porter & Co., Limited.	\$50		\$100,000	2,000	\$50	\$50	—	First year.	—
Shanghai Electric & Asbestos Company, Limited.	\$21 sellers		\$125,000	5,000	\$25	\$25	—	—	—
Shanghai Electric Construction Company, Limited.	£6 sellers	£11	£320,000	32,000	£10	£10	—	—	—

DEBENTURES

LOANS	PRICE—PLUS ACCRUED INTEREST	AMOUNT OF LOAN	OUTSTANDING	NOMINAL VALUE	RATE OF INTEREST	WHEN PAYABLE
Shanghai Municipal Debentures.....1892	Tls. 92 1/2	Tls. 50,000	Tls. 45,400	Tls. 100	5 %	June & Dec.
do.....1893	" 96	" 125,000	" 32,000	" 100	5 1/2 "	Do
do.....1894	" 105	" 105,000	" 60,000	" 100	6 "	Do
do.....1895	" 92 1/2	" 115,000	" 32,600	" 100	5 "	Do
do.....1896	" 92 1/2	" 140,000	" 131,800	" 100	5 "	Do
do.....1897	" 92 1/2	" 268,800	" 268,400	" 100	5 "	Do
do.....1898	" 105	" 300,000	" 60,000	" 100	6 "	Do
do.....1900	" 96	" 33,900	" 31,700	" 100	5 1/2 "	Do
do.....1901	" 105	" 250,000	" 200,000	" 100	6 "	Do
do.....1902	" 105	" 150,000	" 150,000	" 100	6 "	Do
do.....1903	" 105	" 490,500	" 490,500	" 100	6 "	Do
do.....1904	" 105	" 214,500	" 214,500	" 100	6 "	Do
do.....1905	" 105	" 320,000	" 320,000	" 100	6 "	Do
do.....1907	" 105	" 250,000	" 250,000	" 100	6 "	Do
Chinese Imperial Government Loan.....1886 E	" 250	" 767,200	" 354,400	" 250	7 "	Mar. & Sept
Shanghai Land Investment Co., Debentures.....1890	" 103 1/2	" 250,000	" 250,000	" 100	6 "	May & Nov.
do.....1892	" 96	" 250,000	" 250,000	" 100	5 1/2 "	June & Dec.
do.....1894	" 103 1/2	" 250,000	" 250,000	" 100	6 "	Mar. & Sept.
do.....1896	" 92 1/2	" 250,000	" 250,000	" 130	5 "	June & Dec.
do.....1900	" 103 1/2	" 250,000	" 250,000	" 100	6 "	April & Oct.
do.....1901	" 104	" 250,000	" 250,000	" 100	6 "	June & Dec.
do.....1902	" 96	" 100,000	" 100,000	" 100	5 "	May & Nov.
do.....1903	" 103 1/2	" 400,000	" 400,000	" 100	6 "	June & Dec.
do.....1905	" 103 1/2	" 250,000	" 250,000	" 100	6 "	Do
Shanghai Waterworks Co., Debentures.....1909	" 103	" 815,900	" 815,900	" 100	6 "	Do
Perak Sugar Cultivation Co., Debentures.....1902	" 101	" 200,000	" 200,000	" 100	7 "	April & Oct.
Shanghai Gas Co., Debentures.....1909	" 103	" 800,000	" 800,000	" 100	5 "	Do
Shanghai and Hongkew Wharf Co., Debentures.....1902	" 102	" 839,100	" 799,800	" 100	6 "	June & Dec.
Astor House Co., Debentures.....1905	" 103	" 750,000	" 500,000	" 100	7 "	Do
British Municipal Council, Hankow.....1901	Sh. " 105	H'kow Tls 100,000	H'kow Tls 100,000	" 100	7 "	June & Dec.
Shanghai Club Debentures.....1907	" 100	Tls. 170,000	Tls. 170,000	" 100	6 "	Do
Country Club Debentures.....1907	" 97	" 139,000	" 139,000	" 100	6 "	Do
do.....1907	" 97	" 92,000	" 92,000	" 100	6 "	Do
Lane Crawford & Co., Debentures.....1907	" 102 1/2	" 110,000	" 110,000	" 100	7 "	Mar. & Sept.
Anglo-French Land Debentures.....1908	" 102	" 250,000	" 250,000	" 100	6 "	June & Dec.
Central Stores Ltd. Debentures.....1908	" 102 1/2	" 250,000	" 250,000	" 100	8 "	Do
Shanghai Mutual Tel. Co. Debentures.....1909	" 102 1/2	" 350,000	" 200,000	" 100	6 "	Do

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & CO., BROKERS, SINGAPORE, SEPTEMBER 28, 1910)

Date of Formation.	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers.	Sellers.
1903	\$300,000	300,000	30,000	10	10	—	30% for year ending 31-3-10	Belat Tin Mining Co., Ltd.	3.75	4.00
1907	\$300,000	225,000	22,500	10	10	—	6% for year ending 30-4-09	Bruang Ltd.	5.25	5.50
1901	\$600,000	600,000	60,000	10	10	25,000	2/- interim 1909	Bruseh Hydraulic Tin Mining Co., Ltd.	4.00	5.00
1907	\$400,000	375,000	37,500	10	10	—	35% for year ending 31-12-07	Kanaboi, Ltd.	2.40	2.60
1901	\$60,000	60,000	60,000	1	1	—	1/- interim 1909	Kinta Tin Mines, Ltd.	15.50	16.50
1905	\$150,000	99,000	9,900	10	10	6,485.68	—	Kuantan Tin Mining Co., Ltd.	—	3.25
1906	\$120,000	120,000	120,000	1	1	—	—	Lahat Mines Ltd.	8.50	9.00
1906	\$450,000	450,000	45,000	10	10	—	—	Malacca Tin Dredging Co., Ltd.	—	1.50
1906	\$30,000	30,000	30,000	1	1	—	—	Malaya and Siam Corporation Ltd.	—	7.16
1906	\$250,000	179,500	500,000	5/-	5/-	—	—	Pahang Consolidated Co., Ltd.	5.16	6.16
1907	\$100,000	80,000	80,000	1	1	—	—	Pengkalan, Ltd.	4.75	5.25
1904	\$100,000	80,000	80,000	1	1	—	—	Pusing Bahru Tin Mines, Ltd.	6.00	7.00
1904	\$120,000	100,000	100,000	1	1	6,000	45% for year ending 30-6-07	Pusing Lama Tin Mines, Ltd.	2.00	3.00
1907	\$450,000	300,000	30,000	10	10	—	—	Rahman Hydraulic Tin, Ltd.	9.75	10.25
1905	\$27,000	27,000	27,000	1	1	—	—	Rambutan, Ltd.	10.50	11.50
1892	\$200,000	200,000	200,000	1	1	4,873	1/2 paid April, 1910	Raub Aust. Gold Mining Co., Ltd.	4.50	5.00
1905	\$40,000	40,000	40,000	1	1	—	—	Redhills Tin Mining Co., Ltd.	2.50	3.50
1900	\$110,000	110,000	22,000	5	5	—	3% for year ending 22-1-09	Royal Johore Tin Mining Co., Ltd.	1.00	1.25
1907	\$550,000	500,000	50,000	10	10	—	—	Salak South, Ltd.	1.50	3.00
1907	\$80,000	80,000	80,000	1	1	—	—	Sempam Tin Mines, Ltd.	1.25	1.75
1906	\$850,000	850,000	85,000	10	10	25,000	5% interim 1909	Serendah Hydraulic Tin Mining Co., Ltd.	5.25	6.00
1899	\$230,000	230,000	23,000	10	10	—	3% for 1/2 year ending 31-12-08	Sipiau Tin Co., Ltd.	1.50	2.00
1909	\$200,000	\$150,000	15,000	10	10	—	—	Sungei Gau Tin Mining Co., Ltd.	—	4.00
1907	\$90,000	70,000	70,000	1	1	—	1/6 interim 1909	Tekka, Limited	21 00	22.00
1906	\$150,000	150,000	150,000	1	1	—	1/- interim 1909	Tongkah Harbour Tin Dredging Co., Ltd.	9.75	10.25
1902	\$160,000	160,000	160,000	1	1	—	3/- interim 1909	Tronoh Mines, Ltd.	14.00	15.00

SINGAPORE SHARE QUOTATIONS.—(CONTINUED.)

Date of Formation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers	Sellers.
1909	£85,000	75,000	750,000	21-	21-	---	---	STERLING RUBBER	---	51-
1905	£150,000	150,000	1,500,000	21-	21-	---	80% for 1909	Allagar Rubber Estates, Ltd.	12.9	13.9
1909	£50,000	35,250	470,000	21-	116	---	---	Anglo-Malay Rub. Co., Ltd.	016	11 p.
1904	£30,000	20,187 10/-	19,000	1	1	---	50% for 1909	Batang Malaka Rubber Estates, Ltd.	15.10.0	16.10.0
1906	£80,000	70,000	70,000 ¹ *	1	5/-	---	2½% for 1909	Batu Caves Rub. Co., Ltd.	3.17.6	4.2.6
1909	£100,000	74,454	57,818	1	1	---	---	Batu Tiga (Selangor) Rubber Co., Ltd.	2.0.0	2.2.6
1907	£30,000	25,500	22,184 ⁿ *	1	15/-	---	---	Bukit Kajang Rubber Estates, Ltd.	1.15.0	1.17.6 p.
1903	£70,000	66,700	6,000	1	5	2,000	90% for 1909	Bukit Lintang Rubber Estates, Ltd.	4.0.0	4.10.0
1906	£35,000	30,000	6,000	1	1	---	---	Bukit Rajah Rubber Co., Ltd.	2.2.6	2.7.6 p.
1909	£225,000	175,000	175,000	1	1	---	---	Castlefield (K.) R. Estate, Ltd.	15.0.0	15.10.0
1904	£16,000	16,000	100,000	21-	21-	---	75% for 1909	Chersonese (F.M.S.) Estates, Ltd.	4.7.6	4.17.6
1905	£75,000	62,007	60,000	21-	21-	---	78½% for 1909	Cicely Rubber Estates Co., Ltd.	316	41-
1906	£110,000	102,500	620,070	21-	21-	1,000	50% interim	Consolidated Malay Rub. Estates, Ltd.	1.18.0	2.0.0
1903	£600,000	447,200	102,500	21-	21-	---	50% for 1909	Damansara (Selangor) Rubber Co., Ltd.	1.3.0	1.4.0
1909	£45,000	40,000	447,200 ^a	1	1	---	15% for 1909	Duff Development Co., Ltd.	7.0.0	7.10.0
1907	£80,000	70,000	400,000	1	1	---	25% interim	Edinburgh Rub. Estates, (Selangor) Ltd.	13-6	14-6
1906	£310,000	305,000	70,000	21-	21-	---	35% for 1909	Golconda Rubber Co., Ltd.	12-6	13-6
1904	£50,000	30,000	305,000	1	1	8,784	25% interim	Highlands & Lowds. Para Rub. Co., Ltd.	5.10.0	5.15.0
1909	£200,000	143,750	30,000	1	1	2,500	---	Inch Kenneth Rubber Estates, Ltd.	4.18.9	5.2.6
1905	£65,000	65,000	775,000 ^p	21-	11-	---	10% for 1909	Kam. (P.) R. & T. Co., Ltd. "A" Shares	12.0.0	13.0.0
1909	£35,000	£17,250	105,000	21-	21-	---	---	Kam. (P.) R. & T. Co., Ltd. "B" Shares	41-6	49 p.
1906	£180,000	180,000	65,000	21-	11-	---	30% interim	Kapar Para Rubber Estates, Co., Ltd.	9.5.0	9.15.0
1907	£100,000	90,000	95,000	1	1	---	25% for 1909	Kota Tinggi Johore Rubber Co., Ltd.	23	216
1907	£320,000	£252,067 10/-	155,000	21-	21-	---	27½% for 1909	Kuala Lumpur Rubber Co., Ltd.	03	016 p.
1908	£125,000	75,000	180,000	1	1	---	27½% for 1909	Labu (F. M. S.) Rub. Co., Ltd.	7.7.6	7.15.0
1895	£100,000	98,324 81-	900,000	21-	21-	3,000	17½% for 1909	Lanadron Rubber Estates, Ltd.	141-	151-
1907	£140,000	118,000	60,000 ^q *	1	15/-	---	17½% for 1909	Ledbury Rubber Estates Ltd.	5.0.0	5.5.0
1909	£220,000	147,500	40,000	1	1	---	50% interim	Linggi Plantations Ltd.	3.10.0	4.0.0 p.
1906	£400,000	300,000	883,244 ^w	21-	716	4,000	7% for 1909	London Asiatic R. & Produce Co., Ltd.	3.12.6	2.0.0 p.
1903	£30,000	22,500	10,000	21-	21-	---	12½% for 1909	Lumut Rubber Estates, Ltd.	1.17.6	2.0.0 p.
1906	£85,000	85,000	1,180,000 ^k	1	1	---	10% interim for 1909	Malacca Rubber Plants, Ltd.	2.9.0	2.10.0
1909	£60,000	36,875	50,000	21-	21-	---	125% for 1909	Merlimau Rubber Estates, Ltd.	101-9	111-9
1904	£25,000	19,092	150,000	1	1	---	12½% interim 1909	Pataling Rubber Estates Synd. Ltd.	151-	1716 p.
1905	£100,000	100,000	185,000	1	131-	---	---	Perak Rubber Plantations, Ltd.	7.0.0	7.10.0
1907	£100,000	100,000	115,000	1	1	---	---	Rembia Rubber Estates Ltd.	7.0.0	7.10.0
1898	£30,000	30,000	1,750,000	21-	21-	---	---	Sagga Rubber Company, Limited	51-	516
1909	£50,000	32,000	225,000	21-	21-	---	15% for 1909	Sapong Rubber and Tobacco Estates, Ltd.	2.13.0	2.14.0
1906	£65,000	65,000	850,000	21-	21-	---	287½% for 1909	Seaford Rubber Co., Ltd.	81-	91-
1909	£150,000	78,500	15,000 ^z *	1	1	---	7½% for 1909	Selangor Rubber Co., Ltd.	116	316 p.
1909	£120,000	100,000	35,000	1	1216	---	---	Shelford Rubber Estate, Ltd.	10.10.0	11.0.0
1906	£192,500	192,500	17,732 ^u	1	1	---	---	Sialang Rubber Estates, Ltd.	1.2.6	1.5.0
1907	£45,000	45,000	2,268	1	121-	---	---	Singapore Para Rubber Estates, Ltd.	6.15.0	7.0.0
1906	£110,000	100,000	71,378	1	1	---	---	Straits Settlements (B.) Rub. Co., Ltd.	2.16.0	2.18.0
1907	£70,000	55,000	28,622 ¹	1	1	---	---	Sungei Choh Rub. Estate, Co. Ltd.	1.15.0	2.0.0 p.
1904	£50,000	50,000	100,000	1	1	---	---	Sungei Kapar Rubber Co., Ltd.	3.10.0	3.13.0
1908	£150,000	60,000	86,000	1	151-	---	---	Sungei Salak Rubber Co., Ltd.	1216	1716 p.
1907	£200,000	170,000	100,000	1	1	---	---	Sungei Way (Selangor) Rub. Co., Ltd.	2.17.6	3.0.0
1908	£85,000	65,000	1,925,000	21-	21-	---	17½% for year ending 31-3-10	Tebrau (Johore) Rubber Co.	619	71-
1904	£60,000	50,600	45,000	1	1	---	---	United Serdang (S.) R. Plantations, Ltd.	4.10.0	5.0.0
1909	£120,000	105,000	1,000,000	21-	21-	---	37½% for 1909	United Sumatra Rubber Estates, Ltd.	131-	141-
1905	£200,000	151,200	1,000,000	1	1	---	---	Vallambrosa Rubber Co., Ltd.	3.10.0	3.15.0
1910	£500,000	500,000	50,000	10	10	---	---	Alor Gajah Rubber Estate, Ltd.	5.0.0	5.5.0
1910	£750,000	700,000	70,000	10	10	---	---	Ayer Panas Rubber Estates, Ltd.	3.10.0	4.0.0
1909	£300,000	300,000	300,000	1	1	---	---	Balgownie Rub. Estate, Ltd.	2.5.0	2.10.0 p.
1910	£200,000	144,285	12,857 ^m	5	5	---	---	Bukit Timah Rubber Estates, Ltd.	1.00	2.00 p.
1910	£600,000	150,000	20,000	5	4	---	---	Changkat Serdang Estates, Ltd.	par.	1.00 p.
1909	£250,000	200,000	30,000	10	5	---	---	Glendale Plantations, Ltd.	17.00	17.50
1910	£350,000	291,000	11,000	5	5	---	---	Haytor Rubber States, Ltd.	3.50	4.00
1907	£300,000	140,000	20,000	10	7	---	---	Henrietta Estates, Ltd.	2.00	1.50 dis.
1910	£1,000,000	1,000,000	500,000	2	2	---	---	Indragiri (S.) R. and Gutta P. Co., Ltd.	20.00	25.00 p.
1910	£1,250,000	1,250,000	250,000	5	5	---	---	Kelemak Rubber Estate, Ltd.	2.00	2.25
1909	£400,000	400,000	80,000	5	5	---	---	Kombok Rubber Co., Ltd.	2.00	2.25
1909	£200,000	200,000	200,000	1	1	---	---	Malakoff Rubber Co., Ltd.	6.00	6.50
1909	£500,000	450,000	45,000	10	10	---	---	New Singapore Rubber Co., Ltd.	11.00	12.00
1910	£450,000	295,000	45,000 ¹	5	5	---	---	Pajam Limited	1.00	1.10
1910	£200,000	150,000	150,000	1	1	20,000	---	Pantai, Limited	27.50	28.50
1904	£100,000	100,000	50,000 ^b *	2	2	---	---	Pegoh, Limited	13.00	14.00
1903	£450,000	417,300	208,650	2	2	---	---	Port Dickson Rubber Co., Ltd.	5.00	6.00 p.
1909	£250,000	100,000	10,000	10	5	---	---	Pulo Daat Plantations, Ltd.	1.00	1.20
1909	£200,000	165,000	33,000	5	5	---	---	Sandycroft Rubber Co., Ltd.	27.50	29.00
1909	£1,000,000	637,500	737,500 ^y *	1	1	---	---	Singapore & Johore Rub. Co. Ltd.	12.00	12.50
1903	£400,000	400,000	400,000	1	1	---	---	St. Helena Rubber Coy., Ltd.	28.00	30.00
1907	£1,500,000	1,065,150	25,000 ^d *	10	10	---	---	Teluk Anson Rubber Estate, Ltd.	4.50	5.00
1898	£360,000	360,000	116,450	10	7	---	---	United Singapore Rubber Estates, Ltd.	1.00	1.25
1905	£2,400,000	2,400,000	18,000	100	---	170,000	---	Alor Gajah Rubber Estate, Ltd.	1.60	1.80
1896	£1,000,000	1,000,000	6,000	100	100	40,600	---	Ayer Panas Rubber Estates, Ltd.	7.50	7.75
1901	£34,000	34,000	4,000	100	100	---	---	Balgownie Rub. Estate, Ltd.	10.50	11.00
1899	£875,000	875,000	2,750	100	100	---	---	Bukit Timah Rubber Estates, Ltd.	13.00	14.00
1897	£3,500,000	3,500,000	2,500,000	1	1	1,120,000	---	Changkat Serdang Estates, Ltd.	9.50	10.00
1903	£600,000	250,000	25,000 ⁿ	10	10	---	---	Glendale Plantations, Ltd.	1.50	1.80
1891	£30,000	30,000	600	50	50	23,000	---	Haytor Rubber States, Ltd.	1.00	1.20
1884	£200,000	200,000	2,000	100	100	75,000	---	Henrietta Estates, Ltd.	1.00	1.20
1890	£1,000,000	623,000	4,980	100	50	760,000 ^q	---	Indragiri (S.) R. and Gutta P. Co., Ltd.	3.50	4.00
1887	£3,000,000	3,000,000	300,000	10	10	1,222,409	---	Kelemak Rubber Estate, Ltd.	2.00	1.50 dis.
							---	Kombok Rubber Co., Ltd.	20.00	25.00 p.
							---	Malakoff Rubber Co., Ltd.	2.00	2.25
							---	New Singapore Rubber Co., Ltd.	6.00	6.50
							---	Pajam Limited	11.00	12.00
							---	Pantai, Limited	1.00	1.10
							---	Pegoh, Limited	27.50	28.50
							---	Port Dickson Rubber Co., Ltd.	13.00	14.00
							---	Pulo Daat Plantations, Ltd.	5.00	6.00 p.
							---	Sandycroft Rubber Co., Ltd.	1.00	1.20
							---	Singapore & Johore Rub. Co. Ltd.	27.50	29.00
							---	St. Helena Rubber Coy., Ltd.	12.00	12.50
							---	Teluk Anson Rubber Estate, Ltd.	28.00	30.00
							---	United Singapore Rubber Estates, Ltd.	4.50	5.00
							---	Alor Gajah Rubber Estate, Ltd.	1.00	1.25
							---	Ayer Panas Rubber Estates, Ltd.	---	nom.
							---	Balgownie Rub. Estate, Ltd.	216	316
							---	Bukit Timah Rubber Estates, Ltd.	---	10.00 n.
							---	Changkat Serdang Estates, Ltd.	---	6.00 n.
							---	Glendale Plantations, Ltd.	---	30.00
							---	Haytor Rubber States, Ltd.	28.00	57.00
							---	Henrietta Estates, Ltd.	90.00	92.50
							---	Indragiri (S.) R. and Gutta P. Co., Ltd.	---	125.00
							---	Kelemak Rubber Estate, Ltd.	---	nom.
							---	Kombok Rubber Co., Ltd.	20.00	21.00
							---	Malakoff Rubber Co., Ltd.	80.00	82.50
							---	New Singapore Rubber Co., Ltd.	102.00	---
							---	Pajam Limited	4.0.0	4.2.6
							---	Pantai, Limited	11.5.0	12.0.0
							---	Pegoh, Limited	19.00	20.00
							---	Port Dickson Rubber Co., Ltd.	50.00	52.50
							---	Pulo Daat Plantations, Ltd.	160.00	165.00
							---	Sandycroft Rubber Co., Ltd.	190.00	200.00
							---	Singapore & Johore Rub. Co. Ltd.	50.00	60.00 p.
							---	St. Helena Rubber Coy., Ltd.	56.50	57.00
							---	Teluk Anson Rubber Estate, Ltd.	---	---
							---	United Singapore Rubber Estates, Ltd.	---	---
							---	Alor Gajah Rubber Estate, Ltd.	---	---
							---	Ayer Panas Rubber Estates, Ltd.	---	---
							---	Balgownie Rub. Estate, Ltd.	---	---
							---	Bukit Timah Rubber		

YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, SEPTEMBER 25TH, 1910.

STOCKS.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	DATE.	LAST DIV- IDEND.	FOR TERM.	CLOSING QUOTATION.
Brett & Co., Ltd.	-Y- 28,000	2,800	-Y- 10	-Y- 10	31-12-09	12½%	for 1 year	15 Sellers
Club Hotel, Ltd.	185,000	1,850	100	100	31-3-10	6%	for 1 year	70 Nominal
Grand Hotel, Ltd.	500,000	5,000	100	100	31-6-10	5%	for ½ year	95 Sales.
Helm Bros., Ltd.	186,000	3,720	50	50	31-12-10	17½%	for 1 year	85 Buyers.
Langfeldt & Co., Ltd.	100,000	2,000	50	50	31-6-09	6%	for ½ year	60 Sellers.
C. Nickel & Co., Ltd.	500,000	20,000	25	25	30-10-09	20%	for 1 year	50 Sellers.
Thwaites, Limited.	100,000	2,000	50	50	First Year	—	—	45 Sellers.
Yokohama Engine and Iron Works.	500,000	10,000	50	50	31-5-09	—	for 1 year	55 Sales.
Oriental Hotel, Ltd., Ordinary	250,000	3,000	50	50	31-8-07	12%	for 1 year	50 Sales.
Oriental Hotel, Ltd., Preference	250,000	2,000	50	50	—	8%	for 1 year	52:50 Sales
The Union Estate and Investment Co., Ltd.	1,000,000	10,000	100	100	30-9-09	6½%	for 1 year	100 Nominal.
The Clifford Wilkinson Tansan Mineral Water Co., Ltd.	500,000	5,000	100	100	31-12-09	7%	for 1 year	100 Buyers.

† 285,000 unissued.
‡ 475,000 unissued.

*-Y- 390,000 issued.
§-Y- 375,800 issued.

DEBENTURE LOANS.	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE.	CLOSING QUOTATION.
Brett & Company, Limited.	11,500.00	100.00	7%	1 June and 1 Dec.	95 Sales.
Yokohama United Club.	230,000.00	100.00	6%	30 June and 31 Dec.	102 Nominal.
Oriental Hotel, Limited.	350,000.00	100.00	8%	1 April and 1 Oct.	103 Sales.
Union Estate and Investment Co., Limited.	250,000.00	100.00	6%	30 June and 31 Dec.	95 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	LAST DIVIDEND.	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Bonds & Debentures.					
Exchequer Bonds 2nd issue.	-Y-100	-Y-100	5%	March and Sept.	-Y- 99.70
Exchequer Bonds 3rd issue.	100	100	5%	March and Sept.	" 99.70
Railway Bonds (Ko-Gobu).	100	100	5%	June and Dec.	" 101.70
4% Imperial Loan Bonds (1st issue).	100	100	4%	June and Dec.	" 96.10
4% Imperial Loan Bonds (2nd issue).	100	100	4%	March and Sept.	" 95.10
Imperial 5% Bonds.	100	100	5%	March and Sept.	" 100.50
Special 5% Bonds (issued 1906).	100	100	5%	June and Dec.	" 101.10
Yokohama Water Works Bonds.	100	100	6%	June and Dec.	" 105.00
Yokohama City Public Loan Bonds.	100	100	6%	March and Sept.	" 105.50
Osaka City Harbour Construction Bonds.	100	100	6%	June and Dec.	" 105.50
Osaka City Public Loan Bonds.	100	100	6%	June and Dec.	" 105.50
Kawasaki Dock Yards Co.'s Debentures.	100	100	7%	June and Dec.	" 104.00
Tokyo Race Associations.	500	500	30%	June and Dec.	" 180.00
Railways & Electric Trams.					
Tokyo Railway Company, Limited.	50	50	5 2½%	June and Dec.	" 72.70
Yokohama Electric Tramway Company, Limited.	50	50	6%	July and Jan.	" 54.50
Keihin Electric Tramway Company, Limited.	50	50	6%	June and Dec.	" 50.95
Southern Manchurian Railway Co., Ltd.	100	20	6%	June and Dec.	" 46.00
Hanshin Electric Tramway Co., Ltd.	50	50	12%	May and Nov.	" 130.00
Cotton Spinings.					
Kanagafuchi Cotton Spinning Company, Limited.	50	50	14%	July and Jan.	" 103.80
Fuji Gassed-yarn Company, Limited.	50	50	14%	July and Jan.	" 76.60
Tokyo Cotton Spinning Company, Limited.	50	50	8%	July and Jan.	" 42.00
Imperial Hemp Weaving Company, Limited.	50	50	12%	July and Jan.	" 69.55
Nisshin Boseki Kabushiki Kaisha.	50	17½	7%	—	" 12.05
Sugar & Beer Cos.					
Dai-nippon Sugar Refinery Company, Limited.	50	50	—	May and Nov.	" 35.50
Ensuiko Sugar Refinery Company, Limited.	50	20	20%	June and Dec.	" 52.00
Dai-nippon Beer Company, Limited.	50	50	12%	July and Jan.	" 80.80
Kirin Brewery Company, Limited.	50	50	7%	July and Jan.	" 53.00
Docks & Steamships.					
Yokohama Dock Company, Limited.	50	33	12%	June and Dec.	" 63.50
Uraga Dock Company, Limited.	50	50	—	July and Jan.	" 7.50
Kawasaki Dockyard Company, Limited.	50	50	12½%	Feb. and Aug.	" 54.00
Nippon Yusen Kaisha.	50	50	10%	May and Nov.	" 99.90
Hokkaido Tanko S. S. Company, Limited.	50	50	5%	July and Jan.	" 30.25
Miscellaneous.					
Tokyo Electric Light Company, Limited.	50	50	12%	June and Dec.	" 85.70
Tokyo Gas Company, Limited.	50	50	13%	July and Jan.	" 116.55
Yokohama Union Electric Light Company, Limited.	50	50	14%	June and Dec.	" 113.00
Fuji Paper Mills.	50	50	6%	June and Dec.	" 30.00
Otaru Timber Company, Limited.	50	50	—	March and Sept.	" 13.00
Hoden Petroleum Company, Limited.	50	50	20%	April and Oct.	" 67.50
Tokyo Rope Manufacturing Company, Limited.	50	50	18%	June and Dec.	" 112.00
Japan Horse Improvement Company, Limited.	50	50	—	March and Sept.	" 14.00
Tokyo Stock Exchange Company.	50	50	15 1½%	June and Dec.	" 197.50
Osaka Electric Light Company, Limited.	50	50	16%	July and Jan.	" 102.00
Kobe Electric Light Company, Limited.	50	50	14%	July and Jan.	" 106.00

BANGKOK SHARE QUOTATIONS

(COURTESY MESSRS. EDWARDS & CO., BANGKOK, SIAM.) SEPT. 28, 1910

NAME.	BUYERS.	SELLERS.	LAST SALES.	ESTABLISHED.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND	LAST DIVIDEND
Siam Electricity Co., Ltd.	Tcs. 200	Tcs. 325	Tcs. 325	1901	£ 300,000	30,000	£ 10—	£ 300,000	Tcs. 491,388	12% Tcs. 4 bon.
Paknam Railway Co., Ltd.	" 200	" —	" 220	1893	Tcs. 400,000	5,000	Tcs. 80	Tcs. 400,000	" 37,566	14%
Siam Tramway Co., Ltd.	" —	" —	" 108	1905	" 1,450,000	6250 Shares 7250 Deb. 1000 P. Shares	" 100	" 2,230,000	" 1,875	—
Meklong Railway Co., Ltd.	" 90	" 100	" 90	1907	" 2,230,000	22,300	" 100	" 223,000	" 28,000	5%
Bangkok Manufact. Co., Ltd.	" —	" —	" 132	1898	" 400,000	4,000	" 100	" 400,000	" 60,000	7% per for 6
Bangkok Dock Co., Ltd.	" —	" 135	" 135	1865	" 1,000,000	10,000	" 100	" 950,000	" 220,000	months
Siam Steam Packet Co.	" 80	" 909	" 90	1898	" 190,000	3,800	" 50	" 190,000	" 34,000	5%
Siam Commercial Bank.	" 1,000	" 1,500	" 1,000	1906	" 3,000,000	3,000	" 1,000	" 3,000,000	" 338,850	4% for 6 mos.
Menam Motor Boat Co.	" 75	" 90	" 90	1905	" 200,000	2,000	" 100	" 200,000	" —	none
Transport Co., Motor.	" —	" 75	" 100	1906	" 200,000	2,000	" 100	" 200,000	" —	—
Jenderata Rubber Co.*	" —	" 325—	" 325	1906	£ 40,000	4,000	£ 10	£ 7.—paid	" —	—
Bagan Rubber Co.	" —	" 100	" 100	1907	Tcs. 300,000	3,000	Tcs. 100	Tcs. 40 per share	" —	—
Siam Steam Navigation Co., Ltd.	" 300	" 325	" —	1909	" 2,000,000	10,000	" 200	" —	" 10,000	—
Siam Stone Works, Ltd.	" —	" —	" 100	1909	" 350,000	3,500	" 100	" 350,000	" —	6% half year
Kombok Rubber Co.	" 25	" 85	" 32	1906	" 300,000	30,000	\$ 100	\$ 7, per Share	" —	—

PHILIPPINE SHARE REPORT

COURTESY B. A. GREEN, GENERAL SHARE, BOND AND INVESTMENT BROKER.—Manila, P. I., October 10, 1910.

NAME	CLOSING QUOT'N	WHEN INCORPORATED	AUTHORIZED CAPITAL	ISSUE VALUE OF SHARES	NUMBER OF SHARES	NUMBER OF SHARES SUBSCRIBED	PAID UP	RESERVE FUND	WORKING ACCOUNT	DATE	LAST DIVIDEND
American Drug Store.....	.....	1908	P 100,000	P1,000	100	51	P1,000	P5,000	P 50,000	June 30, 1910.	.....
Antamok Valley Mining Co.....	P0.40	1909	500,000	1	500,000	320,000	1	.....	.....	.....	First year.....
Banco Español Filipino.....	P235.	1851	3,000,000	200	15,000	12,980	200	408,715	.....	July 1, 1910.	5% First Half 1910..
Baybay Valley Oil Co.....	100.	1909	100,000	100	1,000	.....	100	.....	.....	.....	First year.....
Benguet Commercial Co.....	85.	1908	200,000	100	2,000	736	100	.....	.....	.....	8% for 1906.....
Benguet Consolidated Mining Co....	0.65	1903	2,000,000	2	1,000,000	495,000	2	.....	.....	.....	.....
Bua Mining Co.											
Common.....	90. }										
Preferred.....	140. }										
Cadwallader-Gibson Lumber Co....	.....	1908	1,000,000	100	10,000	8,650	100	.....	.....	.....	.....
Camote-Clayton Mining Co.....	.....	1909	400,000	10	40,000	26,000	10	.....	.....	.....	First year.....
Compania Maritima.....	50.	1894	510,000	100	5,100	5,100	100	.....	.....	.....	20% for 1902.....
East Batan Coal Mining Co.....	33.	1909	3,000,000	50	60,000	40,000	50	.....	.....	.....	First year.....
El Varadero de Manila.....	70.	1885	450,000	100	4,500	4,500	100	.....	.....	.....	3 1/2% for 1909.....
Electrical Supply Co.....	.....	1909	100,000	100	1,000	280	72	.....	.....	.....	First year.....
Export & Import Lumber Co.....	.....	1908	200,000	200	1,000	1,000	200	.....	.....	.....	.....
Escolta Press Inc.....	105.	1907	50,000	100	500	320	100	.....	.....	.....	12% for 1909.....
Fabrica de Hielo de Manila.....	62.	1894	350,000	50	7,000	7,000	50	.....	.....	.....	3% for 1st Qt. 1910..
Germinal Cigar Factory.....	500.	1900	1,500,000	500	3,000	3,000	500	.....	.....	.....	12% for 1909.....
H. E. Heacock & Co.....	.....	1909	100,000	100	1,000	800	100	.....	.....	.....	First Year.....
Headwaters Mining Co.....	10.	1908	600,000	10	60,000	59,800	10	.....	.....	.....	.....
Insular Lumber Co.....	140.	1907	2,000,000	200	10,000	9,000	200	.....	.....	.....	.....
Lepanto Mining Co.....	.....	1906	1,000,000	100	10,000	8,000	100	.....	.....	.....	.....
Juan Seiboth Co.....	.....	1908	150,000	20	7,500	500	20	.....	.....	.....	.....
La Concha Button Factory.....	90.	1905	75,000	100	750	530	100	.....	.....	.....	15% for 1909.....
Los Banos Improvement Co.....	200.	1908	100,000	200	500	500	200	.....	.....	.....	16% for 1908.....
Lambert, Springer Co.....	.....	1908	200,000	1,000	200	80	1,000	.....	.....	.....	.....
Luzon Stevedoring Co.....	25.	1909	250,000	25	10,000	4,200	25	.....	.....	.....	.....
Luzon Sugar Refining Co.....	.....	1882	700,000	100	7,000	7,000	100	.....	.....	.....	3% for 1907.....
Manila Electric Ry. & Light Co....	125.	1903	12,000,000	200	60,000	.....	200	.....	.....	.....	4% for 1909.....
Manila Hotel Co.....	100.	1909	400,000	100	4,000	3,500	100	.....	.....	.....	Under Construction..
Minas Carbon de Batan.....	240.	1902	1,000,000	200	5,000	1,523	200	.....	.....	.....	.....
Mindanao Herald Publishing Co...	.....	1907	15,000	100	150	75	100	.....	.....	.....	1/2% for 1908.....
Paracale Gold Dredging Co.....	15.	1907	£10,000	£1	10,000	10,000	£1	.....	.....	.....	£1 for 1908-9.....
Paracale Ext. Gold Dredging Co...	10.	1909	P450,000	P10	45,000	.....	P10	.....	.....	.....	First Year.....
Palomar Park Amusement Co.....	0.25	1908	300,000	1	300,000	.....	1	.....	.....	.....	.....
Phil. Hemp Machine Co.....	.....	1908	1,000,000	100	10,000	.....	100	.....	.....	.....	.....
Philippine Publishing Co.....	120.	1907	600,000	200	3,000	2,187	200	.....	.....	.....	10% interim for 1910.
Philippine Co., Ltd.....	10.	1904	750,000	10	75,000	75,000	10	.....	.....	.....	.....
Philippine Gold Dredging Co.....	10.	1907	200,000	10	20,000	20,000	10	.....	.....	.....	.....
Philippine Rosin & Turpentine Co.	.....	1908	150,000	1	150,000	70,000	1	.....	.....	.....	.....
Philippine Exploration Co.....	700.	1908	2,000,000	10	200,000	120,000	10	.....	.....	.....	.....
Port Banga Lumber Co.....	.....	1908	100,000	100	1,000	934	100	.....	40,000	Oct 1, 1910.	.....
Rosenstock Publishing Co.....	.....	1908	75,000	10	7,500	6,000	10	.....	.....	.....	.....
San Nicolas Iron Works.....	100.	1901	300,000	500	600	600	500	.....	.....	.....	15% for 1903.....
San Mauricio Gold Mining Co.....	35.	1908	4,000,000	200	20,000	20,000	200	.....	.....	.....	.....
Sanitary Steam Laundry.....	23.50.	1908	100,000	20	5,000	3,000	20	.....	.....	.....	.....
Tarlac Railway Co.....	65.	1906	150,000	100	1,500	1,500	100	.....	.....	.....	.....
Tumbaga Mining Co.....	15.	1909	1,000,000	40	25,000	24,125	40	.....	.....	.....	First Year.....
Union Hemp Machine Co.....	.....	1909	50,000	10	5,000	2,600	10	.....	.....	.....	First Year.....
Walter E. Olsen Co.....	100.	1909	500,000	100	5,000	2,033	100	.....	.....	.....	First Year.....
Zamboanga Cold Storage Co.....	125.	1903	40,000	100	400	200	100	.....	.....	.....	20% for 1909.....

PHILIPPINE BONDS

	DATED	AUTHORIZED	ISSUED	OUTSTANDING	PAR VALUE	RATE OF INT.	WHEN PAYABLE	LAST QUOTATION
Philippine Friar Land Bonds.....	Feb. 1st, 1904	\$7,000,000	\$7,000,000	\$7,000,000	\$ 100	4%	Feb. 1, 1914	104 1/2
Public Works and Permanent Improvement Bonds.....	March 1, 1905	\$5,000,000	\$2,500,000	\$2,500,000	\$ 100	4%	March 1, 1915	104 1/2
Do.....	Feb. 1, 1906	.....	\$1,000,000	\$1,000,000	\$ 100	4%	Feb. 1, 1916	104 1/2
Manila Sewer and Water Works Improvement Bonds.....	June 1, 1905	\$4,000,000	\$1,000,000	\$1,000,000	\$ 100	4%	June 1, 1915	104 1/2
Do.....	Jan. 2, 1907	.....	\$2,000,000	\$2,000,000	\$ 100	4%	Jan. 2, 1917	104 1/2
Philippine Railway First Mortgage Four per cent Thirty Year Sinking Fund Gold Bonds.....	July 1, 1907	\$15,000,000	\$5,736,000	\$5,736,000	\$1000	4%	July 1, 1937	97

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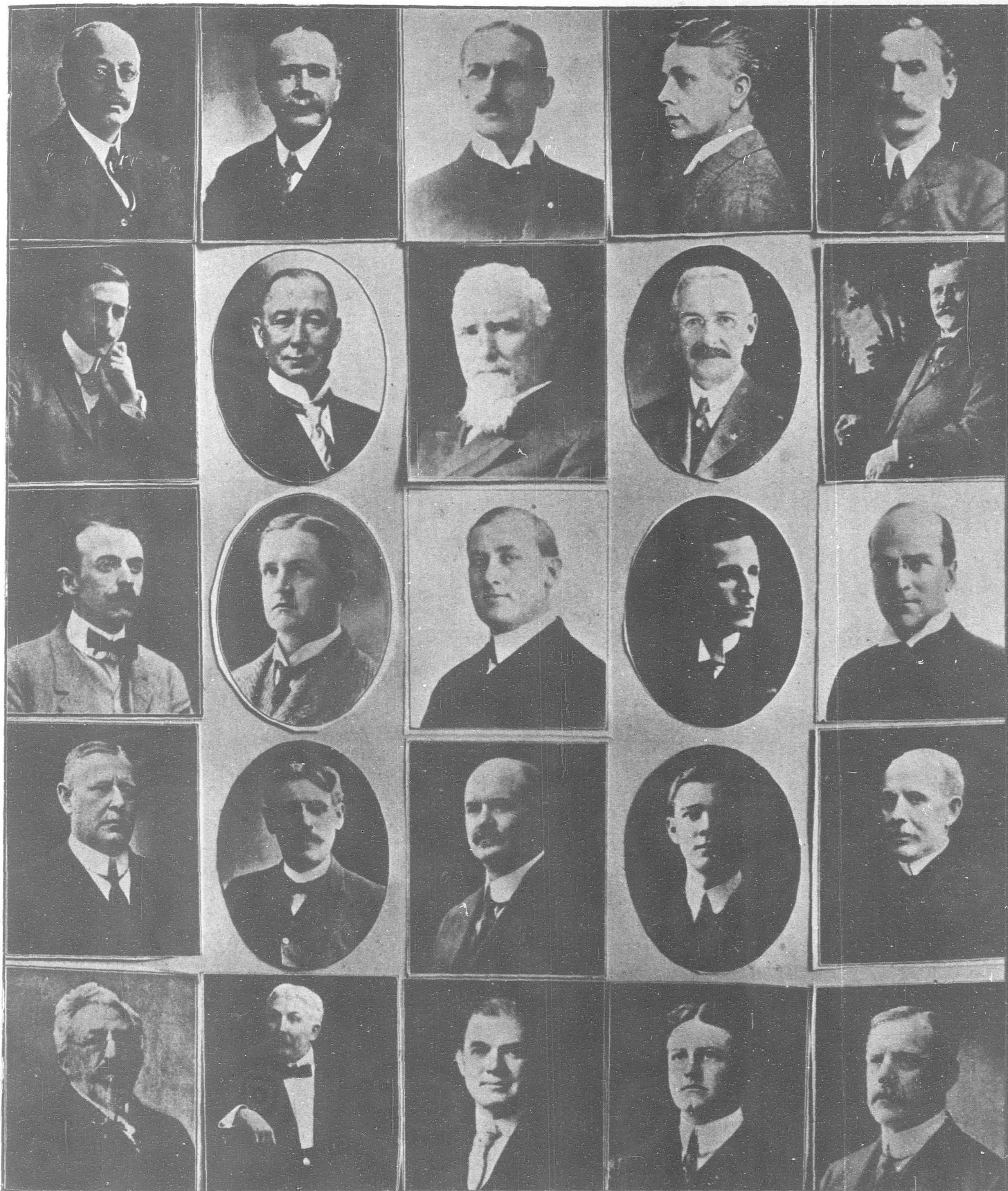
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